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R.O.T.C., the Key to National Defense

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I

WAR has been described as a migration of creatures who force their way into territory occupied by other creatures and are met by resistance. In some forms of life, as with germs, all the invaders become engaged with all the defenders. In other forms—ants, for example—some of the creatures are developed as soldiers, some as workers, etc. Among savages all men fight until they get too old. Among civilized peoples wars were formerly conducted by standing armies, the civilian population not participating nor caring very much as to the outcome. Now the entire resources of nations are pitted against each other—moral, physical and industrial.

And war will continue as long as creatures have different ideas as to their rights and are willing to fight for them.

II

Necessity knows no law—and Military Necessity is supreme. In appraising an R. O. T. C. graduate as a prospective officer, we should not ask "Is he qualified?" We should ask, "Is he the best material available?" and "How can he be improved?"

The first question is answered in the affirmative. Young college graduates with two years' military training under federal supervision are far and away the best material that America could ever have for the quantity production of company officers in time of war.

The second question is answered by saying that we cannot improve the mental, moral and physical character of these young men by any means at our disposal, but we can improve their military knowledge three hundred per cent by changing the R. O. T. C. courses. This can be done without any increase in present appropriations and without taking any more of their precious time from other studies.

III

The best military law ever written upon the statutes of the United States was the old Militia Act of 1792. Those were the days when legislators were statesmen. They thought clearly and had the faculty of reducing their thoughts to writing. This act provided that every able-bodied male citizen between eighteen and forty-five should be enrolled in the militia. It provided for organizing these men into regiments, brigades and divisions. It required them to

turn out, without pay, for training and inspections, and, under pain of punishment, to furnish their own uniforms, equipment, arms and ammunition. It gave us a national army of citizen soldiers. There was a fatal defect, however, and after languishing on the books for over a hundred years, the law was repealed. The fatal defect was that the execution of the law rested with the governors of the several states instead of with the President.

IV

The present National Defense Act is a good law. Some give it Character "Excellent." I can only hand it "Good." The C. M. T. C. is fine. The National Guard is wonderful. The Regular Army and the Reserve Officers Corps are far from perfect. The fatal defect in the Reserve Officers Corps is that it is organized around the veterans of the World War and there is no provision for replacement. As long as the veterans last all is well and good. When they are gone we shall have a millstone around our neck—a corps of one hundred thousand officers, in grades from second lieutenant to major general, whose only knowledge of the military profession will be what they learned as boys at school, supplemented by subsequent correspondence courses and fourteen meager days in contact with troops once every five years. (This figure is based upon present congressional appropriations.)

V

It goes without saying that exclusive of World War veterans the only men in America, or the best men in America, to exercise high command in time of war are the professional soldiers. In this I am willing to include the National Guard and the Marines, though their employment is not germane to this discussion.

At the outbreak of the Civil War two hundred eighty-one officers resigned from the Regular Army and joined the South. Jefferson Davis, a graduate of West Point and ex-Secretary of War, had the good sense to appoint these officers at once to high command. Samuel Cooper, Adjutant General of the Army (with rank of colonel); Joseph E. Johnston, Quartermaster General; Robert E. Lee, colonel of cavalry; P. T. Beauregard, captain of engineers; and others, were made full four-star generals in the Confederate forces. Regular Army lieutenants became lieutenant generals. Grant in his memoirs regrets the same thing was not done in the

northern army and recommended that at the outbreak of another war the Regular Army be disbanded and its personnel distributed among the emergency forces.

General Pershing asked that no brigadier generals be sent to him over forty years of age, and no major generals over forty-five. What shall we do in the next war with paper battalions, regiments, brigades and divisions commanded by men over fifty years of age whose professional knowledge has been acquired by lectures and correspondence and who, in the average case, have not had more than ninety days' actual contact with soldiers during the preceding thirty years?

VI

Congress has provided twelve thousand Regular Army officers, in time of peace, at a cost of over thirty-eight million dollars per year. Six thousand of these are extra. That is, they are not required for the tactical or administrative organization of the Regular Army. They are used, in time of peace, to train the civilian components. What are they going to do in time of war? Are they going to lead these men in battle or are they going to stand and coach them from the side lines?

VII

At the date of the Armistice General Pershing was asking for an army of one hundred divisions in France. This together with the overhead at home would have required half a million officers, three hundred thousand in the combatant branches of the line and two hundred thousand in the services of supply. By properly distributing our professional soldiers, by reorganizing the R. O. T. C., and by a more intelligent organization of our S. O. S. personnel, we could provide an Emergency Officers Corps four hundred thousand strong, without increasing present appropriations for National Defense. This corps would be much more efficient than the present Reserve Officers Corps (excluding World War veterans) and could stand the analysis of cold logic upon its merits.

The general outline of this scheme for an Emergency Officers Corps is as follows:

a. From certain R. O. T. C. institutions (hereafter indicated) commission all graduates, Basic as well as Advance Students, as lieutenants and captains in the Emergency Officers Corps. These young officers should be required to take no training and have no obligation except in case of war. At the end of five years their commissions should expire, unless they voluntarily choose to take training and compete for promotion. This would give us an annual crop of forty thousand fine young men, with a total of two hundred thousand at an average age of twenty-five years. Selected C. M. T. C. graduates should be treated in the same way.*

b. From the above classes and from the National Guard, promotions should be made, after five years' service, to the grade of major, all such officers being required to take, in the grade of major, a regular course of training involving annual encampments and to be discharged from the service upon reaching the age of

*About ten thousand captains and lieutenants could be had from the warrant officers and soldiers of the Regular Army.

thirty-five. This would give us about thirty thousand majors of the line.

c. From the Regular Army, Marines and National Guard, and from World War veterans as long as they last, we should fill the grades from general officer down to lieutenant colonel. We would need about twenty thousand.

d. From professional men in civil life and without regard to age (up to sixty-four years), we should appoint S. O. S. men. Men whose ordinary vocations fit in with their army duties, who are already seventy-five per cent trained, would require no peace-time expenditure of public funds for that training. It would not be necessary for them to know the Army red tape, and the essentials of their duties could readily be acquired from simple manuals. We could use about one hundred fifty thousand of these.**

e. The present organization of the Reserve Officers Corps into units higher than the regiment, and even into regiments away from the large cities, is just a paper proposition and has no advantage except for administration. So-called unit training has a sentimental value, but little else. Under the proposed Emergency Officers Corps we would have a paper army for purposes of mobilization—the important thing—and the training would be adapted to the requirements of the individual. When the time is limited this is the best way to utilize it.

More details of this plan will be indicated later.

VIII

The United States Military Academy at West Point may be considered as the number one R. O. T. C. institution in this country. It is the best military school in the world. It has furnished officers for the Regular Army and, in addition, has exceeded many other colleges in the United States in the percentage of graduates to attain success in civil life. Other military schools, the Virginia Military Institute and The Citadel, for instance, were created in imitation of West Point to furnish officers for the state forces at a time when the burden of national defense rested upon them.

It has already been indicated that Jefferson Davis, unhampered by promotion lists, precedents and politices, used his Regular Army personnel to better advantage in the organization of the Confederate Army than was possible in the case of those who stood by the Stars and Stripes. Davis received two hundred ninety-six West Point graduates, one hundred ninety-three from the Army and one hundred three from civil life. From these graduates he appointed eight full generals; fifteen lieutenant generals; forty major generals; and eighty-eight brigadier generals. Of the Corps commanders in the Confederate Army only two were non-West Point graduates; of the Army commanders, none. He used the graduates of the state military schools in the same way.

But the North did not go far in the plan of putting

**In France the S.O.S. included everything except the actual fighting at the front—doctors, lawyers, all forms of transportation, construction and forestry, telephone, telegraph, and every thing connected with the supply of food, clothing and ammunition.

their professional soldiers in charge of their volunteer forces. Regular Army "combat teams" were retained intact, and Grant was refused the services of a Regular Army second lieutenant, whom he wanted for colonel of a volunteer regiment, because "he was the only officer on duty with his company."*

IX

The plan of going outside of West Point and accepting the state military schools and other similar institutions as an integral factor in our system of national defense was not a Regular Army idea. It did not originate with the General Staff. Neither the Regular Army nor the General Staff has ever fully understood these schools or appreciated their tremendous importance. The big idea was first conceived during the Civil War by a member of Congress—Justin S. Morrill—who introduced compulsory military training in the Land Grant Colleges. For fifty years it languished and had no more to do with national defense than did algebra or football; and today the R. O. T. C. stands to the Army as the horseless carriage stood to the automobile. The horse was taken away, the shafts were removed, and something inside made the thing go. The R. O. T. C. boy is just a Regular Army soldier with something left out. He wears the Regular Army uniform, draws the Regular Army ration, studies the Regular Army regulations, and receives a little something of Regular Army training. At the end of the first year, future bankers and big business men are qualified to serve as privates in the ranks of an emergency army. At the end of the second year they are qualified to serve as corporals and sergeants. Having then completed the compulsory military training under the Morrill Act, they are free to take two more years of advanced work—voluntary—and qualify as lieutenants in the Officers Reserve Corps.

An average young American with a fourteen-year-old mind and an eighth grade education can qualify as an expert with any weapon issued to the American Army within fifteen days after his induction into the military service. During the same time he can be hardened to march with his command, whether afoot, ahorse, or in the back seat of an automobile. He can be taught to obey his officers and to perform the essential duties of a private soldier in the field. Time spent in teaching college men to become private soldiers is time wasted. They learn to tie knots in ropes and to name the parts of obsolete ordnance; to take down and reassemble machine guns blindfolded; to operate motor transportation—when we already have thirteen million licensed chauffeurs at large in the country; and in the case of dentists, they learn to execute the manual of arms. If the clerk at a soda fountain were discovered taking the cash register apart blindfolded, it might cause comment, but we take pride in a class of blindfolded sophomores who can put together the intricate parts of a magazine rifle.

*Grant, himself, and Sherman were examples in the northern army of R.O.T.C. (West Point) graduates called back from civil life to take high command. But the War Department was not responsible for this.

X

General Pershing, in his book on the World War—the greatest book upon any military subject ever written by an American—says:

"In each succeeding war there is a tendency to proclaim as something new the principles under which it is conducted. Not only those who have never studied or experienced the realities of war, but also professional soldiers frequently fall into the error. But the principles of warfare as I learned them at West Point remain unchanged. They were verified by my experience in our Indian Wars, and also during the campaign against the Spaniards in Cuba. I applied them in the Philippines and observed their application in Manchuria during the Russo-Japanese War."

These immutable principles of the military art were learned by General Pershing at West Point with Up-ton's Tactics, an old-fashioned breech block rifle, a muzzle-loading artillery. How much of our time with the R. O. T. C. is devoted to teaching immutable principles and how much of it is devoted to teaching the technique of military weapons that will be obsolete before the next war?

R. O. T. C. institutions may be assembled into the following groups:

Group I: Essentially military schools originally modeled after West Point and graduating boys of college age. Entirely independent of the federal government for the support of military instruction. Examples: Norwich University, Pennsylvania Military College, Virginia Military Institute, The Citadel.

Group II: Same as Group I, but for younger boys. Examples: Shattuck, Manlius, Culver.

Group III: Essentially military schools, but with agricultural or mechanical arts as a primary objective. Dependent upon federal aid for the support of military training. Examples: Virginia, Texas and Clemson Agricultural and Mechanical colleges.

Group IV: Semi-military colleges which give a course of military training compulsory for all freshmen and sophomores, but optional for juniors and seniors. Some of these are Land Grant Colleges, such as Kansas State Agricultural College; and some are not, such as Coe College, at Cedar Rapids, Iowa.

Group V: Essentially civilian colleges at which a small number of students elect to take military training. Examples: Yale, Harvard.

Group VI: Medical colleges, high schools and other miscellaneous institutions not included in the first five groups are not considered in this discussion.

Group I Institutions.

Norwich University, Pennsylvania Military College, Virginia Military Institute, The Citadel, as indicated above. These institutions came into existence long before the National Defense Act. They were created by the states to provide officers for their own defense—just as Congress at the suggestion of Washington created West Point to provide officers for the defense of the nation. They were developed without federal aid.

They were modeled after West Point—had their own courses of instruction, their own traditions, their own methods—and have been impeded rather than advanced by the superimposition of R. O. T. C. units. The Citadel (the one with which I am most familiar) was created in 1843. The state law provided that the Battalion of Cadets should be organized as infantry, but that since it was to be a school of instruction the functions of the other arms should be taught also. Its graduates were eligible for appointment to any office in the state forces below the grade of colonel.

This is the way the Corps of Cadets was organized at West Point, and still is. But not satisfied with this, in the case of the Citadel the federal government has superimposed upon this four-company infantry battalion a three-company coast artillery formation and has changed the course of instruction from one suitable for cadets (young officers) to one suitable for enlisted men. Thus the institution now looks like the print from a kodak film that has had two exposures. Formerly the textbooks on artillery were the same as at West Point. Now Citadel cadets study the manual for second-class gunners—a wholly unnecessary grade in the Regular Army, created for the sole purpose of giving men two dollars a month extra pay, which is more than it is worth.

These R. O. T. C. units should be withdrawn from these purely military schools. Instead of having so-called unit instructors they should have the West Point organization, with Regular Army officers detailed as Commandant of Cadets, tactical officers, etc. Whatever federal assistance they receive—and they should get a plenty—should be in a lump sum and, within reasonable limitations, expendable as the institutions think best. They should be allowed to develop and to manage their own curriculum. We should judge them by results and not hamper them with infinite details that impede their progress. Stonewall Jackson and George C. Marshall will vouch for the V. M. I. Other great soldiers will vouch for the efficiency of the other institutions as they were operated before the days of federal aid contingent upon interference. Graduates should be commissioned as captains in the Emergency Officer's Corps.

Group II Institutions.

Shattuck, Manlius, Culver, etc. The same remarks apply to this group except that the graduates are younger and do not have the mental equipment of college graduates. They should be commissioned upon graduation as second lieutenants in the Emergency Officers Corps and advanced to first lieutenants when they become twenty-one years of age. If they subsequently graduate at college, they should then be commissioned as captains. In the Group II institutions the brightest of the boys will be considerably under twenty-one years of age upon graduation. But that should not prevent their being made lieutenants. Napoleon was a lieutenant at sixteen. Generals Drum and DeWitt were commissioned in the Regular Army before they were nineteen, and a number of officers in the Confederate Army were generals at twenty-one.

Group III Institutions.

Virginia, Texas and Clemson Agricultural and Mechanical colleges. Their military courses approximate very closely to those of Group I, but since these are Land Grant Colleges and have an objective other than military they should be given more federal supervision than those of Groups I and II. But even the Group III schools should be allowed great latitude. The graduates should be commissioned as captains the same as for Group I.

Group IV Institutions.

Under the Morrill Act, passed in 1862, Land Grant Colleges such as the Kansas State Agricultural College are required to give military instruction; and a number of others, like Coe College, have adopted the same system, in consideration of which they receive federal aid. It is to this group and to the following group that the principal discussion of this paper is directed, because most of the energy and funds expended by the government is directed towards these colleges.

The course of instruction in the Group IV colleges is divided into Basic and Advanced. The Basic is compulsory and the Advanced is optional. Instruction is provided for by the establishment of so-called R. O. T. C. units peculiar to the several arms; such as an infantry unit, a coast artillery unit, etc. The freshmen and sophomores are taught the duties of private soldiers in these several arms and receive certificates of qualification as noncommissioned officers. The juniors and seniors are trained as officers and upon graduation are commissioned in the Reserve Corps. But only twenty per cent of the Basic students pass up to the Advanced Course, so that eighty per cent of all this effort is wasted. And thirty thousand young college graduates, with two years' military instruction under federal supervision and at government expense, pass out of these schools every year with no obligation to serve the country in case of emergency. The two hundred hours of military instruction received by them is equivalent to a two-year enlistment in the National Guard. What folly to waste such opportunity and such material!

The time available is not devoted to teaching the simple fundamental principles of the military profession. It is padded out with the National Defense Act, Customs of the Service, and the little non-essential details that make up the routine of a soldier's three-year enlistment. We should recognize these young college men as cadets and should go directly to the point of qualifying them as officers of an emergency army. So-called R. O. T. C. units should be abolished and there should be one fundamental basic course for all Group IV institutions. This course should comprise the fundamental principles common to all arms. It should be contained in a textbook prepared by a competent author under the auspices of the War Department. The present course of instruction is indicated by eleven hundred forty-six separate references to various official publications—a sentence here, a paragraph there, and a page somewhere else. Out of this tangled mass of

Army red tape civilian publishers, ahead of the Army in recognizing the necessities of the case, have collected these scraps of paper, and pasted them together in the form of R. O. T. C. manuals which they sell to students.

In selecting a course of instruction for the R. O. T. C. we must use the time to the best advantage and from the many subjects of military value should take those that are interesting, dignified and of definite value to the student in his civil vocation. We must remember that these students are preparing themselves for the keen competition of civil life. That is their main objective. The Army is a side line. They have got to make a living, support a family and reap the joy of success. The best men have no time to waste and will demand value received for every hour they spend at college. You can hear a successful business man or a lawyer or a doctor say that the military bearing, the orderly habits and the respect for authority that he learned at military school had served him well in after life. But you cannot hear him say the same thing about the nomenclature of the Mortar Deflection Board.*

We must also bear in mind that we are dealing with college boys and not with enlisted men. Youth attaches great importance to matters of little import to maturer minds. The Honorary Colonel, the Company Sponsors, express the spirit of the R.O.T.C. They extend a wholesome influence and those in authority should take the greatest possible advantage of the inspiration behind this idea. R. O. T. C. students are young officers in the making—the War Department notwithstanding. They are cadets. They should be treated like cadets, and dressed like cadets. Their organizations should be called Cadet Corps. The names of the institutions should be attached—thus: “The Kansas State Cadet Corps.” Their officers should be called Cadet Captain, Cadet Colonel, etc.

The criticism of this paper is directed principally toward the Basic Courses, designed to qualify the students to serve as enlisted men. The Advanced Courses might be retained somewhat along present lines, with such modifications as naturally follow from the changes made in the Basic and substituting Essentials, of course, for Non-essentials.

Upon graduation from a college of the Group IV class, each student should be commissioned as an officer

*The inventor takes occasion to apologize to the R.O.T.C. for the twenty-eight technical names attached to the various parts of this device, none of which he knows himself.—J. H.

in the Emergency Officers Corps, the Basics as second lieutenants and those who have completed the Advanced Course as first lieutenants or captains, according to their aptitude and accomplishments.

Group V Institutions.

These should be handled along the same lines as those of Group IV, with such modifications as obviously follow on the fact that all students do not take the course of military training.

Distribution of Graduates.

Commissions should be prepared in advance and handed out with diplomas on graduation day. As indicated above they should run for five years, without any obligation for training or service except in case of war. This would give us a stock of two hundred thousand company officers with a twenty per cent turnover each year—new blood—and distributed as follows:

Captains:

Graduates, military colleges	6,500		
Selected graduates from military schools and from Advanced Course Land Grant Colleges*	8,500	15,000	

First Lieutenants:

Selected graduates, military schools	3,000		
Graduates, Basic Course, Land Grant Colleges	25,000	28,000	

Second Lieutenants:

Graduates, military schools	5,000		
Graduates, Basic Course, Land Grant Colleges	152,000	157,000	

GRAND TOTAL

200,000

*In this tabulation the term Land Grant Colleges includes Group V institutions.

XII

Thirty years ago the Adjutant General—afterwards Premier—of Australia visited America in a world-wide search for a military system adapted to the genius of his people. It was he who first suggested to me that America had the best military school in the world and more military schools than all the rest of the world together, but that outside of West Point none of the American military schools were incorporated in our military system.

I think we can say that this great R. O. T. C. system, peculiarly American, peculiarly adapted to the genius of our people and to the youth of our land, is not fully developed—not half developed—and that we Regular Army soldiers, on the whole, do not understand these boys nor sympathize with their problems.



Maneuvers of 1st Cavalry Division

By Major Cuyler L. Clark, 82d Field Artillery

THE field maneuvers of the 1st Cavalry Division in May, 1931, were planned to afford training of all participating units in operations in mountainous terrain and in country lacking in an adequate road net and limited in water supply.

The day preceding the first movement of troops, all visiting officers and officers and noncommissioned officers of the garrison were assembled by the Division Commander, and the objects of the maneuvers were explained.

The fact that the maneuvers were to be held to teach sound military lessons rather than to prove the superiority of one force over another was stressed. In those cases when local encounters might occur with no umpire present, both sides were enjoined to decide, by a conference of commanders, the probable outcome; in case of disagreement, to call an umpire from another locality.

Attention was called to the importance of the experiment to be conducted with the radio-telephone in order that all might observe and derive the greatest benefits from this innovation.

The following troops participated:

Brown.

Headquarters, 1st Cavalry Division
Division Special Troops
2d Cavalry Brigade, consisting of:
Headquarters and Headquarters Troop, 2d Cavalry Brigade.
1st Cavalry
8th Cavalry
1st Battalion, 82d Field Artillery (less Battery A)
Troop A, 1st Armored Car Squadron (less 2d Platoon)
Troop B, 8th Engineers (Squadron) (less 2d Platoon)
1st Medical Squadron (less detachments)
1st Cavalry Division Quartermaster Train
(less 1st Pack Train and detachments)
Two airplanes with necessary personnel.

White.

7th Cavalry
Battery A, 82d Field Artillery
2d Platoon, Troop B, 8th Engineers (Squadron) (less one section)
2d Platoon, Troop A, 1st Armored Car Squadron
1st Pack Train and detachments, 1st Cavalry Division Quartermaster Train
Detachment, 1st Medical Squadron
Two airplanes with necessary personnel.

As the Cavalry Service probably will be more interested in the tactical and logistical lessons to be drawn

from maneuvers than in a detailed account of the movements which took place day by day, only a brief outline will be given of the situations which brought the troops into contact.

The general situation represented war as being imminent between Texas (Brown) and New Mexico (White) with the Brown main forces concentrating at Sierra Blanca, Texas, covered by the Brown Cavalry force at Fort Bliss, and the White main forces concentrating at Alamogordo, New Mexico, covered by the White cavalry force at Alvarado (Map No. 1.).

The Brown message that announced the declaration of war reported the White force at 2:00 P.M., May 22d, 1931, to be guarding the border from the vicinity of Alvarado, N. M., and to be composed of a Cavalry regiment reinforced by Artillery, Armored Cars and Airplanes. The Brown force was given the mission of defeating the hostile Cavalry force in its front, of securing Orogrande and of preparing to delay the advance of the main White force from Alamogordo until the arrival of the Brown corps from Sierra Blanca.

The White message which announced the declaration of war reported that the Brown force at Fort Bliss was composed of a Cavalry division, less one brigade, and that it was planning to invade White territory at once. The White force was given the mission of delaying any advance of the enemy on Orogrande and of holding him south of Jarilla Mountains until the arrival of Infantry reinforcements due at 4:00 P.M. the following afternoon.

The first missions called for the rapid advance to seize Orogrande by the Browns and delaying action by the Whites to hold that point until relieved by other troops. The depth of advance was influenced by the necessity of reaching Orogrande, which was the first point north of Fort Bliss that was provided with natural water supply. Water as far north as the border was obtainable from tank cars but not after passing that point until time had elapsed for the repair of that part of the railroad in hostile territory.

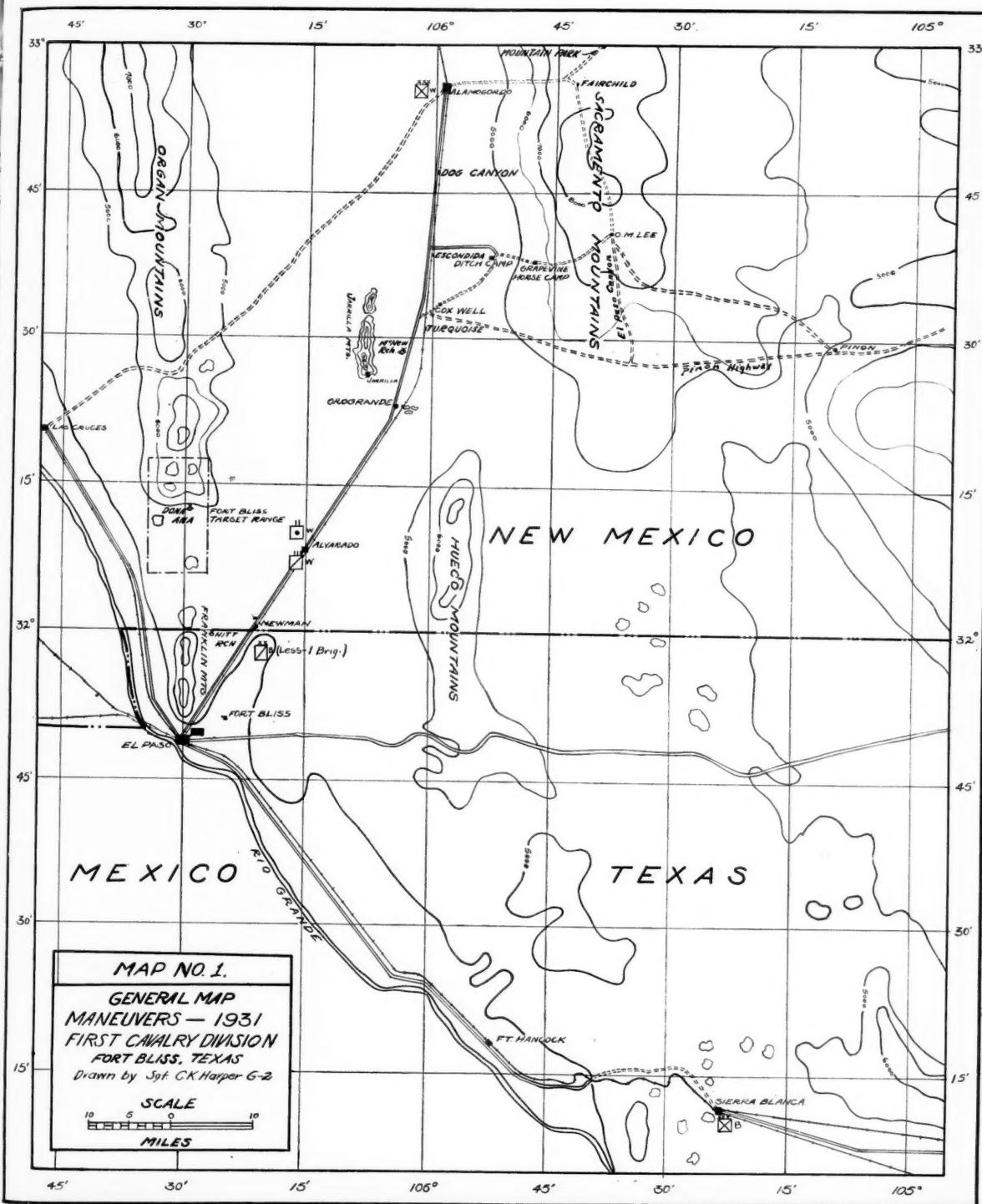
The terrain between Newman and Orogrande was very open, and the only outstanding defensive or delaying position was that at Orogrande. The terrain was suitable, however, for delaying action by a small force, as sand dunes and patches of mesquite afforded enough cover for this purpose.

Upon the declaration of war the Brown commander ordered aerial reconnaissance and directed a squadron which was already on outpost south of Newman to seize that town at dark and hold it until the arrival of the main force.

The main Brown force marched in two columns at dark on Newman, where it was halted to feed and water the animals and to give the troops a hot meal.

It began its advance from Newman at about 4:00 A.M., using a formation designed to overrun quickly hostile resistance. The formation employed one squadron as the advance guard, one squadron paralleling the main body on the right of the axis of movement, one squadron on the left, and the remainder of the force

following the advance guard. About 5:30 A.M. the Brown air service reported that the enemy had evacuated Alvarado and that the main White force was going into position just south of Orogrande. Subsequent reconnaissance revealed the fact that the White commander had detached one troop, reinforced by



machine guns, to delay the advance of the Browns. This troop during the day occupied only one position which was strong enough to require the Brown force commander to employ his artillery, but by the constant use of machine guns in successive delaying positions it caused almost continuous delay in the advance of the Brown force. The distance from Newman to the objective for the day, Orogrande, being 34 miles, it was necessary for the Brown force to maintain an average rate of march of three miles per hour in order to reach the final position south of Orogrande in time to capture it before nightfall.

During the march to the border the armored cars were moved to Hitt's Ranch to cover the Brown left flank and to be prepared to advance promptly around the west flank of the Whites as soon as the border was crossed. The mission given the armored cars when the attack order was issued was as follows:

"To go to Orogrande via Dona Ana and thence south from Orogrande by the Orogrande-Newman road until contact was gained with the main White forces and to report enemy movements, the size of a troop or larger, seen along or from your route of march."

In accordance with these instructions the Brown armored cars proceeded by the route designated and reached the rear of the White position at Orogrande at about 10:30 A.M. It reported the White dispositions by detaching one car to carry the message back to the Brown commander.

While in rear of the White position, the armored car platoon discovered the radio station and limbers of the White artillery which was in position southeast



Individual Mount Radio Receiving Sets.

of Orogrande. It attacked and would have caused great damage in these installations. The personnel of the platoon, however, were so intent upon their attack that they failed to note the guns of the battery which were concealed in the mesquite near by. As a result, the platoon became engaged at close range in a fire fight with the battery and, by umpire's decision, was ruled out of action for four hours.

The Brown force commander began reconnoitering for the attack on the White position at Orogrande at

1:10 P.M.; the attack order was issued at 2:00 P.M.; and the marching columns were assembled preparatory to attack by 3:00 P.M. At this time the White force withdrew to Cox Well, and the Brown force went into camp for the night.

One of the interesting features of the advance was the control of the flanking squadrons by radio telephone, while moving. The installations which enabled this communication to be maintained consisted of a truck transmitting set which followed the commander's car and telephone receiving sets attached to the saddle pockets of mounted signal men who accompanied the squadron commanders. The Brigade commander's car was equipped with a radio telephone set which enabled him also to maintain constant communication with the Brown airplanes. This use of radio telephone and the moving motorized command post aroused widespread interest among the observers.

Upon the termination of the troop movements Saturday, all military operations were suspended to allow all troops to rest over Sunday. During this time the Brown force remained in camp at Orogrande and the White force at Cox Well.

At midnight Sunday the progress of the maneuvers was resumed in accordance with missions received at that time. The Brown and White messages represented the White Infantry brigade, in bivouac at Dog's Canyon Station ten miles south of Alamogordo, as taking over the mission previously assigned to the White Cavalry force; and a Brown regiment of Corps Cavalry as taking over the mission previously assigned to the Brown Cavalry. The maneuver troops were thus released to operate in the Sacramento Mountains, which are located about thirty miles northeast of Orogrande.

The new mission given the Browns required them to defeat the enemy now at Cox Well without delay and then to proceed via O. M. Lee-Fairchild-Mountain Park to harass the enemy concentration at Alamogordo; the new White mission required the Whites to move to the Sacramento Mountains and cover the left flank of the Corps by delaying any attempt to turn the White left flank via O. M. Lee-Fairchild-Mountain Park.

The terrain over which the troops now fought can best be visualized by referring to Map 2 and the attached photograph, Plate A. The elevation of the flats at the base of the mountains is about 4600 feet. The bluffs seen in the photograph rise abruptly about 2000 feet to the mesa. The mesa is in general bare or covered with small scrubs until an elevation of about 7000 feet is attained. At this point the tree line is reached, and the character of the country changes completely. The tree line marks the boundary of the Lincoln National Forest and the Oliver Lee Game Preserve, which are heavily wooded and well watered areas between 7000 and 10,000 feet in elevation.

The photograph shows a general view of the Sacramento Mountains as they appear from the vicinity of Cox Well, the location of the White force at the beginning of the phase. The only practicable routes through the mountains for the withdrawal of the White



Plate A. A Distant Airplane View of the Sacramento Mountains.

force run northwest up the valley of the Sacramento River from Lee's Ranch. To reach Lee's Ranch from Cox Well, there are two roads which are suitable for wheeled transportation. The first goes northeast through the flats to Ditch Camp and thence up Grapevine Canyon; the second by a longer but less difficult route via the Pinon Road and El Paso Canyon. This route goes east through the gap south of the Sacramento Mountains and then turns north into the mountains.

Based on the mission assigned, the White force began withdrawal from Cox Well at 12:00 midnight and moved on the Sacramento Mountains. The Brown force immediately sent out its armored car platoon to gain and maintain contact with the White force and to report the direction of withdrawal. As this platoon was prevented from moving around the south flank of the White force by the presence of armored cars west of Cox Well, it withdrew and proceeded via Escondida around the north flank. It encountered a squadron of the White force entering Grapevine Canyon just before daylight. Unfortunately for the Brown commander, the platoon was discovered and driven off by one-pounder fire before accurate information as to the composition of the White force could be obtained.

About 5:00 A.M. the main Brown force marched in one column with one squadron in advance guard to regain contact with the Whites. By 8:15 A.M., the

following dispositions were reported by the Brown Air Service. (Map No. 2).

One troop with machine guns covering the mouth of Grapevine Canyon.
 One troop in Culp's Canyon.
 One troop with machine guns at western edge of the mesa on the Pinon Road.
 One troop moving north from Rutherford Tap Tank towards O. M. Lee.

The actual dispositions of the White force at this time were:

One squadron covering Grapevine Canyon.
 One troop in Culp's Canyon.
 One squadron (less one troop) at western edge of mesa on Pinon Road.
 Headquarters Troop and one battery of artillery in the vicinity of Rutherford Tap Tank.

The White artillery battery had not been located, although especial efforts were made by the Brown air service to find it. It remained concealed during the day by the simple device of placing guns irregularly in position and by scattering the horses in small groups so as to appear the same as the dispersed cavalry troops in the vicinity.

Two plans of advance were considered by the Brown force commander:

1. Advancing immediately on the western exit of Grapevine Canyon with a view to seizing the commanding ground in that vicinity, preliminary to further operations.

2. Occupying a centrally located assembly position until nightfall and then moving under cover of darkness to the attack. The location of water was one of the determining factors in the consideration of these plans. Water was found in this situation only at the following widely separated points that could be reached in one march:

Cox Well
Water Point No. 1
Ditch Camp
Grapevine Horse Camp
Culp's Tank

The last two positions were in the hands of the Whites.

The Brown commander decided to employ the plan which called for the capture of the western exit of Grapevine Canyon. The command was watered at Water Point No. 1, and, about 1:00 P.M., while at this point, orders for the further advance were issued. One regiment was ordered to make a feint against the mouth of the canyon while the other moved across country in deployed formation by the most direct route so as to strike a point about two miles above the mouth of the canyon. The regiment which was to make the assault encountered rough country in its advance, but it was in position to attack the ridge protecting the canyon by about 5:00 P.M. It was opposed at this point by one troop, reinforced by machine guns. At this time an umpires' decision was rendered giving the probable outcome of the attack. The decision permitted the Brown force to occupy the western exit of the canyon. The White force withdrew to a position about two miles east of Grapevine Horse Camp.

The mountain fighting which occupied the next two days was the most interesting part of the maneuvers. The rough country over which the troops were engaged slowed down their speed and made them think more about the importance of terrain features. The real thrills, of course, came to the members of numerous small detachments of the command who for the first time were required to act on their own initiative in strange country.

To explain the Brown plan of attack, it is necessary to describe first the routes of advance into the mountains:

Grapevine Canyon: From Ditch Camp to Lee's Ranch via Grapevine Canyon is a distance of about 12 miles. This, the most direct route, was thought to be too strong to be forced by direct operations.

The Cow Trail: The airplane photograph marked Plate B shows, in the upper left hand corner, this trail ascending the long hogback. The Grapevine Canyon road may be seen in the center and foreground of the photograph. After reaching the mesa, the Cow Trail continues with increasing elevation to Shelton's Lower Ranch and Shelton's

Home Ranch. From these two points trails are found which cross over the ridge into the valley of the Sacramento.

Culp's Canyon: This route proceeds through a comparatively open ravine as far east as the Point 20, where the wall of the mesa rises abruptly. Lee's Ranch may be reached from this point by a trail going eastward into El Paso Canyon and then turning north. The distance from Ditch Camp to Lee's Ranch over the last route mentioned is about 25 miles.

The plan for the attack was as follows: One regiment, with one pack train attached, to march early May 26th via Culp's Canyon and Rim Tank and by noon May 27th to attack towards the north and drive the enemy force now at O. M. Lee towards Bishop.

One squadron with one pack train attached to move early May 26th via the Cow Trail just north of Grapevine Canyon, Shelton's Lower Ranch and Bishop to take up position astride the Bishop—Lee's Ranch Road at Bishop by 11:00 A.M., May 27th, and attack towards O. M. Lee; on the morning of the 27th, this squadron to detach a rifle platoon and a light machine gun platoon to march to the junction of the Shelton and Grapevine Road (Point 24) to assist the remainder of its regiment by attacking down Grapevine Canyon. One regiment less one squadron to make a demonstration up Grapevine Canyon and to continue to press up Grapevine Canyon until the canyon was cleared. The artillery battalion, less one battery, to cover the advance of the squadron moving up Grapevine Canyon from position in the vicinity of Ditch Camp and to be prepared for prompt forward displacement.

A special sketch covering the operations was prepared to facilitate communication and to assist in keeping all personnel oriented as to the progress of the advance. All important tactical points in the vicinity of the routes of advance were given code numbers and each unit down to include the troop was given a new code designation. It was planned to maintain communication with the columns entirely by radio and wireless telephone. The airplanes acting as observers for the commander were ordered to keep him informed of the progress of the advance, using the radio-telephone as a means of communication.

During the afternoon and night of the 26th the Whites shifted their forces to meet the attack of the Browns as follows:

One troop of the north squadron was sent up the trail running north from Point 24 to cover the north flank of this squadron. This troop established an outpost line with one platoon at Shelton's lower ranch and one platoon on the trail east of McFadden's Ranch.

One platoon of the machine gun troop was attached to the north squadron, and the troop less one platoon was placed in El Paso Canyon to protect the south flank.

One troop remained in Culp's Canyon, and a squadron, less one troop, in Grapevine Canyon.

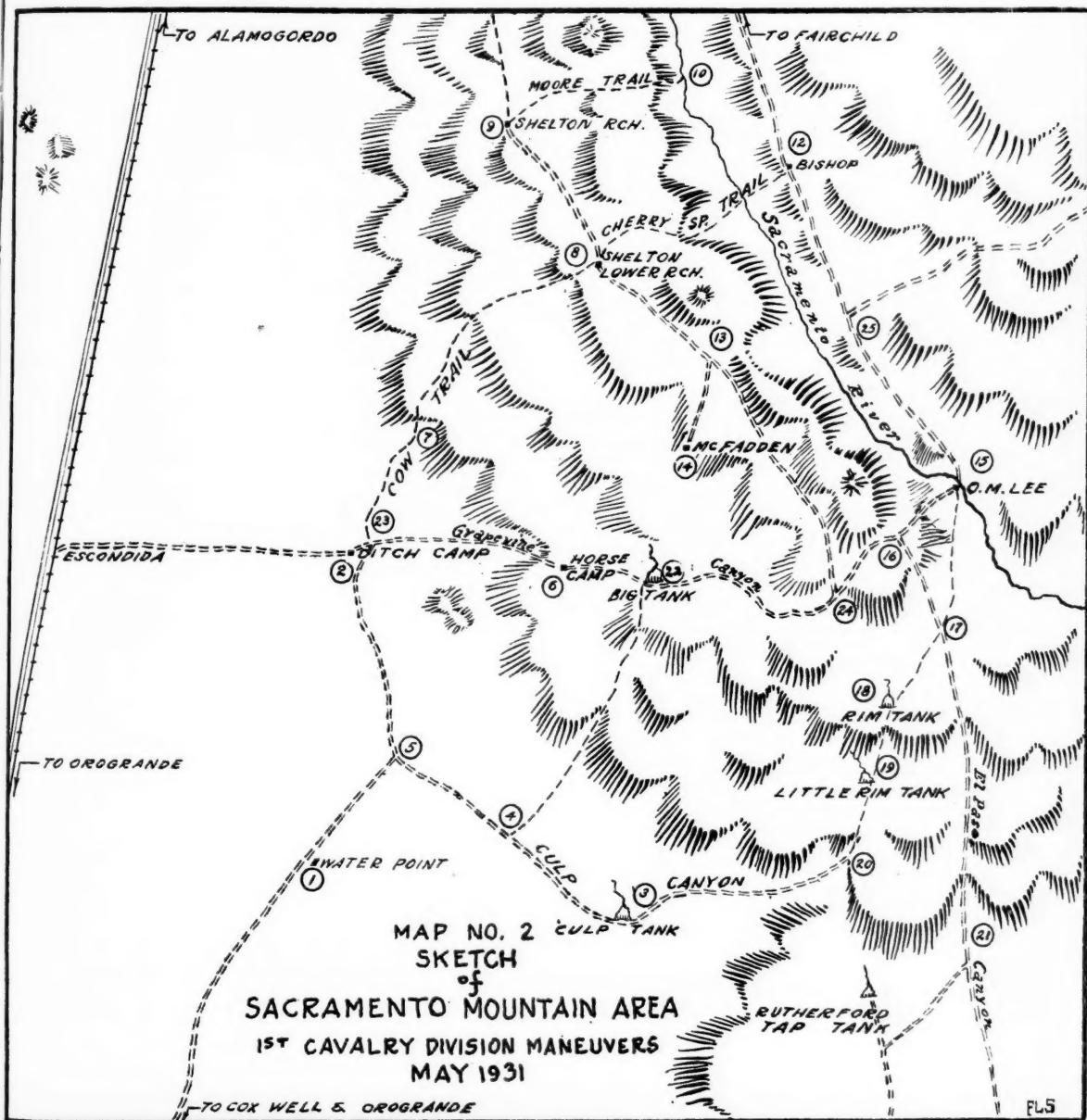
with the mission of delaying the advance of the Browns.

The remainder of the White force, consisting of Headquarters troop and one troop of cavalry and the battery of artillery, was placed in reserve at O. M. Lee.

The advance of the south column was opposed by the White troop near Culp's Tank. This troop occupied successive delaying positions. By night fall the column succeeded in advancing to the vicinity of Point 20. During the latter part of the advance, the White troop was driven to a flank, and its radio set which had remained in position was captured. The center column succeeded in advancing about three miles up Grapevine Canyon during the course of the day. During the

night one platoon of artillery was displaced forward to support the advance of this column. It was previously considered inexpedient by the Brown brigade commander to attempt to use the 75-mm. guns in the mountains, but when given an opportunity this weapon soon demonstrated its usefulness. By 7:30 A.M. the platoon had succeeded in neutralizing a White machine gun position in Grapevine Canyon that the squadron had been unable, up to that time, to capture.

The north column encountered the White platoon on outpost at Shelton's Lower Ranch at about 3:00 P.M. This platoon was not expecting the Browns to approach from the direction they came and as a result was surprised, and a large part of the platoon was captured. The action terminated about 5:00 P.M. The



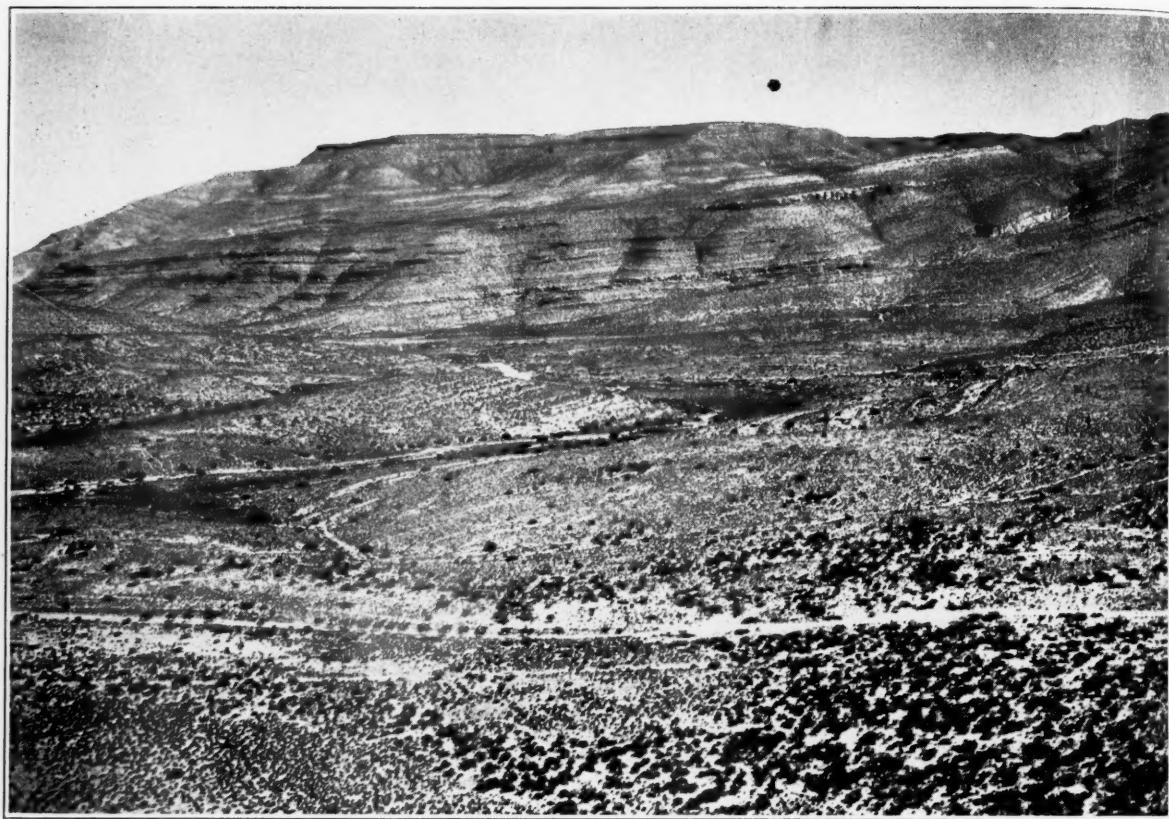


Plate B. An Airplane View of the "Cow Trail" and of Grapevine Canyon.

Brown squadron then marched north to Shelton's Home Ranch to obtain water for the animals.

During the night the White force prepared to retire northward and sent the troop which had been in regimental reserve northward beyond R. J. 25 to cover the withdrawal. The White plan contemplated turning eastward at R. J. 25 to avoid contact with the Brown squadron at Shelton's Home Ranch. The troop placed one squad with machine guns on the trail which runs east from Shelton's Lower Ranch and one squad with machine guns on the trail running northeast from Shelton's Home Ranch.

The trails referred to were so limited by the mountainous character of the terrain that flanking movements from them were considered impossible. This fact accounts for the small forces assigned to the mission of blocking the trails. The remainder of the troop occupied a position astride the Sacramento Road north of R. J. 25. The rest of the White forces were ordered to fall back on Lee's Ranch preparatory to withdrawal. It was not feasible to order withdrawal until the scattered detachments of the force could be assembled. During the night, May 26th-27th, the Brown forces closed in on Lee's Ranch and prepared for the final attack.

At 8:00 A.M. the White order for the withdrawal was issued, but before the withdrawal could be executed the Brown assault fell on the White positions

from the west and south. This was followed about 10:00 A.M. by a wide envelopment by a squadron of the south column which crossed over the ridge into the Sacramento Valley and attacked Lee's Ranch from the east.

In the meantime the north column had succeeded in crossing over into the Sacramento Valley near Bishop. Upon reaching this point it occupied a position astride the road and sent out patrols to locate the main White force. Before contact was gained with the White troop which was covering the route of withdrawal selected by the White commander, a change of mission caused the withdrawal of both forces. As a result of the enveloping attack of the Browns on Lee's Ranch, the White commander had been forced to modify his plan for the withdrawal of the entire command and to retire at once with such troops as were not directly engaged. This retirement was being carried out when the next change in the Brown mission was received.

Throughout the maneuvers particular attention was given to the procedure to assure control at all times. It is believed that some improvement over the regulations governing past maneuvers resulted. Umpires were instructed to act between the opposing forces rather than with one side or the other. Taking a position at the limit of effective fire from the defenders' position, the umpire kept each side informed as to the

probable effects of the fire of the opposing side. His position enabled him to prevent promptly the attacking force from disregarding the effects of the fire of the defender.

One of the most important lessons of the maneuvers is believed to relate to signal communications. As previously explained, the Brown force had a special radio-telephone net superimposed over the usual radio net, which continued to operate handling principally administrative messages. As a result of this special organization and experimental equipment, the Brown brigade commander was able to direct from his command post the movement of his command into the mountains, in three columns over a broad front. In the operations which ensued the command penetrated the mountains for a depth of twenty-five miles, established two overnight camps, reassembled, and withdrew over one road to the Ditch Camp. All of these movements were executed without confusion, as directed from the command post at Ditch Camp. The White force, on the other hand, was equipped with only the three radio sets ordinarily assigned a cavalry regiment plus one additional truck set assigned for umpire control. None of the special radio-telephone equipment supplied the Brown force to enable them to carry out experimental work, was available. No special coded map was used, and no special training outside that ordinarily given in the regiment was pursued in preparation for the maneuvers. Communication within the regiment was normal. The need for communication facilities, however, was exceptional,—as great, or greater, than that required by the attacking force, whose plans were less dependent upon information of the enemy than were those of the defender. Even with the advantage of the possession of high ground on its side, the defenders in such a situation face a very difficult problem. The signal communication of such a force should be based not upon its tactical designation but upon the mission to be performed. Its communication facilities should be specially organized with its mission in view.

During that part of the maneuvers occurring in the mountains, frequent discussions were heard among the observers present as to the action that would have resulted from an attack on the position by an infantry force of equal strength to the cavalry force employed. Such discussions are by nature problematical, but the course the maneuvers took seemed to bring out one point clearly; that is, that a cavalry plan which makes use of its superior mobility to seek the rear of the defenders' position is apt, in mountainous country, to be very decisive in its effect. An infantry attack, due to its inability to seize the routes of withdrawal in rear, is less likely to bring about a complete evacuation of the hostile position.

The afternoon of the 27th and morning of the 28th were used to assemble the White and Brown forces, which were now combined to constitute the Brown force. By noon on the 28th, all units were located in the vicinity of Ditch Camp.

On May 28, 1931, messages were received which changed the mission of the Brown force. The White

Infantry Brigade at Dog's Canyon Station reinforced by one squadron of cavalry was represented as advancing southward as an advance guard of the White Corps. Confronting this force was one regiment of cavalry which was soon attached to the Division, thus giving it a cavalry strength of three regiments, actual, and one regiment, assumed. The Brown force was then ordered by Corps to move to a position north of Orogardne and to occupy and defend a line extending east and west through McNew's Ranch until relieved by the 1st Infantry Division marching north from Newman.

The objects sought in this situation were the instruction of the supply and administrative services in their specialties and the added experience which those elements of the command which had been engaged entirely in offensive missions would receive in defensive tactics.

About 4:00 P.M. the unit commanders, who had been furnished automobile transportation at Ditch Camp, were assembled on the defensive position north of Orogardne for reconnaissance, and the orders for occupation of the position were issued. The troop movement, which began at dark, brought all units to their positions by 2:00 A.M.

The infantry flag attack began at 5:00 A.M. In order to insure this part of the maneuvers being conducted according to approved infantry tactics, two infantry officers who were with the division as observers were put in charge, and sufficient officers detailed as their assistants to assure control.

The flag attack was continued until all elements of the command were required to withdraw to a second position. This took until about noon, when the maneuvers ended.

An account of the maneuvers would not be complete without some reference to the problems of supply. During the first three days the line of communication was the hard surfaced road leading north from Fort Bliss to Orogardne. The railroad which paralleled the road was not used on account of shortage of funds to cover freight shipments. After reaching Orogardne the line of advance followed unimproved dirt roads through the flats to the mountains. As far north as Orogardne the Motor Transport Company was used in lieu of the railroad. The Company was composed of 23 3-ton Class "B" Trucks and 7 new 2-ton F. W. D. Trucks on pneumatic tires. Due to the small peace time strength of units and the fact that one regiment of the division was not present, it was possible for the Motor Transport Company to move in one load two days' supplies, including long forage.

Beyond Orogardne the use of motor transportation was restricted on account of the nature of the roads. Some use of the F. W. D. and light trucks, however, was made to carry perishable supplies and combat equipment in the initial movement to Ditch Camp. During the three days the troops were in the mountain area, all use of motor transportation was prohibited both in the mountains and in the flats adjacent to the mountains where the poor roads existing had already been cut up by troop movements. This restriction was

necessary to prevent damage to motor vehicles beyond the existing facilities for repair. During the time that the use of motor transportation was possible, supplies were moved to points within easy marching distance of the regimental field trains; in some cases, directly to the kitchens. When the use of motors was restricted, the loads were transferred to wagon and pack transportation.

The White force was given one of the four pack trains with which the division is equipped and sufficient motor and wagon transportation to handle its supplies



Left to right: Brigadier General Walter C. Short, Commanding 2nd Cavalry Brigade; Hon. Patrick J. Hurley, Secretary of War; Major General Ewing E. Booth, Commanding 1st Cavalry Division.

from bases established prior to maneuvers. All the remaining divisional transportation was assigned to the Brown force. The Brown Brigade administrative plan for the advance beyond Orogrande was in part as follows:—

- a. Spring wagons loaded with 1/3 day's rations, grain and wood to follow the main body without distance.
- b. Escort wagon elements of combat trains to march with the field trains.

c. Field trains loaded with 1 day's rations, grain and wood to follow the spring wagon column without delay.

d. Motor elements of field trains to follow the spring wagon columns. This plan was in effect until the orders for the attack in the mountains were issued. During the period of the attack the actual supply from the distributing points to troops was accomplished by pack transportation. Sufficient pack animals were attached to each regiment to carry its supplies for the duration of two days' action. No long forage was supplied in the mountains.

The supply of troops entirely by pack and horse-drawn transportation was found to call for much more careful planning than is necessary when motor transportation is used. In some cases, due to oversight by regimental supply personnel, troops found themselves lacking in one or another element of the ration, on account of loads having been improperly made up. In general, however, conditions which made necessary the use of animal transportation slowed up the rate of advance of the troops themselves, and this fact enabled the supplies to keep up.

The supply of ammunition was simulated by specifying 25 rounds of blank rifle ammunition as a day's fire and by making similar assumption regarding the ammunition of other weapons. The ammunition stocks were carried in the firing elements, combat trains and divisional trains. The real problem of ammunition supply was, of course, not represented because the actual use of the tonnage of ammunition that would be required was not feasible.

The most difficult G-4 problem in the maneuvers is believed to have been the supply of water. Along the entire line of advance, water was obtainable only from widely separated points. This condition brought out the fact that, in cavalry actions, commanders often must base their movements on the important consideration of water supply at the termination of the day's movements. Incidentally, the Engineer water filtration and purification unit which was attached to the Brown force proved to be of great practical value when water had to be obtained from open sources.



Cavalry and Mechanized Force

By Brigadier General Hamilton S. Hawkins, U. S. A.

RECENT announcements from the War Department concerning Mechanized Force and Cavalry have, it is believed, been misunderstood and misinterpreted by the press, and sensational headlines and statements have appeared informing the public that the horse is doomed in the military service and that it is the intention of the War Department to mechanize the entire Cavalry as soon as the necessary funds can be provided.

But Mechanized Force can never replace Cavalry on any terrain. It is undoubtedly a coming arm and must be developed. Not as a replacement but as an additional force.

Since the rôle and mobility of a Mechanized Force more nearly resembles that of Cavalry than that of any other arm, Cavalry officers are selected to command and lead it. It must be understood, however, that this is also because of the fact that Mechanized Force will accompany Cavalry frequently as a reinforcement, just as battalions of light Infantry have done under certain circumstances in the past, especially in Europe.

There is an idea prevailing among some officers that Mechanized Force is to be assigned Cavalry missions in what is termed ordinary country, and Cavalry kept for work in difficult country. This idea is very false and dangerous. The most important of the Cavalry missions must be performed by the Cavalry in any military campaign. Mechanized Force will be able in suitable terrain to take over a few of the smaller or less important missions; but, in any country whatever, whether suitable for Mechanized Force or not, the more important Cavalry rôles must be undertaken by Cavalry. That this Cavalry can be strengthened and assisted materially by a Mechanized Force in suitable terrain is undoubted. The combination and cooperation of the two is the true idea, and any departure from this principle will bring disappointing results.

Now, just what is meant by *ordinary country* or by *difficult country* is a little obscure. Cavalry has repeatedly shown its superior mobility in rough mountainous terrain or in swampy flats. Presumably this is difficult terrain for Mechanized Force. Cavalry has operated successfully in the Rocky Mountains of America and in the swamps of Virginia and the Philippines. The famous Candaba swamps of Luzon were successfully traversed by Cavalry during the Philippine Insurrection. But Cavalry is still more useful in country that is not so difficult. What is ordinary or suitable terrain? If we take the three states New York, New Jersey, and Pennsylvania, we find a rolling terrain interspersed with farms, meadows, patches of woods, creeks with steep banks and muddy bottoms, and some very rough hills. An excellent country for Cavalry operations. Many roads exist for the use of

motor vehicles. A Mechanized Force could accompany Cavalry but could not alone take over any very large operation in support of the Infantry in battle, as the Cavalry can. There are too many thick woods and other obstacles to rapid movement of machines.

We have seen demonstrations of tanks knocking down trees and stone walls and proceeding at speed over level meadows. But it is absurd to think of tanks and passenger trucks, carrying machine gunners, romping through woods and swamps, creeks and villages at the speed that Cavalry can attain. It is one thing to knock down a tree. It is quite another thing to proceed at speed through or over the piling up logs and timbers.

The most important job of Cavalry is to fight in conjunction with and in support of Infantry. Not to precede the Infantry by a hundred miles. The superior mobility of Mechanized Force on roads is comparable to the superior mobility of Infantry over Cavalry when the Infantry is moved by railroad trains or by trucks and the Cavalry is moved by marching. This has been true for many years. When the Infantry arrives within contact distance of the enemy, it must detrain or detruck at a safe distance. In the field of maneuver it becomes, not motorized nor entrained Infantry, but good and real Infantry, depending upon its legs and its stamina for its maneuver or its advances across country. When a Mechanized Unit arrives it is simply a Mechanized Unit, very capable in some but not all situations, and not able to maneuver very far from its gas and oil supplies, which are brought up on roads. When the Cavalry arrives it is Cavalry, capable of rapid maneuver on any terrain, even though separated from its supplies of forage for several days at a time.

Railroad trains can be used to carry the Cavalry to the theater of maneuver. Why always consider that it must march? In a country without railroads we shall find few roads of any kind, and a Mechanized Force will move towards the theater of maneuver no faster than the Cavalry. A Mechanized Force that has succeeded in getting a very long distance ahead of the Infantry or Cavalry may find itself alone in very serious difficulty, especially if hostile Cavalry is active and cuts off its supply of gas and oil. A horse can go several days without food and can usually find some vegetation and water to support him for a week or two. But show us the motor vehicle that can move a foot without gas or a mile without oil. Tanks and tractors require an enormous amount of these supplies.

As armies approach each other the rate of their advance must slow down, however rapidly they have moved up to a certain distance from the enemy, and it will be found that Cavalry can, as of old, keep ahead

of the army during this period for such missions as are usually assigned Cavalry preliminary to the general engagement.

Whenever anyone is considering the replacement or substitution by Mechanized Force for Cavalry, he should examine very carefully into how our modern Cavalry is equipped and armed, how it moves and what is really meant by its mobility. The average person who has had but little experience with Cavalry—and this applies to some cavalrymen—pictures a Cavalry column marching on a road at five or six miles per hour, automobiles and trucks whizzing by and leaving the column as though standing still. Not very mobile as compared to machines! He might as well compare the speed of these machines or railroad trains to that of a column of marching Infantry, which is much slower than even the Cavalry. Yet every one, or almost every one, knows that we must have Infantry and that it cannot be replaced by Mechanized Force.

Neither the Infantry nor the Cavalry will march a hundred miles from Point "A" to Point "B" if it can be transported by rail or by truck. But when they arrive at Point "B," or within a few miles from there, if the enemy is there, they will detrain and detruck and their own special characteristics will be brought into play. A Mechanized Unit, however rapidly it has travelled, must halt at the same place and alter its formations to suit its own qualities.

Keeping in mind that it is not intended to disparage or discourage the development of Mechanized Force but to deny it as a substitution for either Cavalry or Infantry, we should examine the qualities of these various forces.

As long as Infantry and Artillery exist, there must be Cavalry. In fact longer, because it is more mobile than either of these arms. But there must always be Infantry. Even if Mechanized Force could maneuver anywhere and everywhere that Infantry can, which of course is not so, we could never maintain in time of peace enough of these costly machines for time of war. We would have as many of them as our government would permit but, when war is declared, we are going to mobilize as many men as we can and try to have more of them than the enemy has. Those that do not go into the Mechanized Force and other special forces are going to be organized as Infantry, Cavalry and Artillery, and other branches. Therefore, there must always be Infantry. Of course, there are other reasons why Infantry cannot be replaced. Some of the fighting it does cannot be done as well by any other force.

Now, if the enemy has Infantry we must have not only Infantry but Cavalry as well. If there is Infantry in an opposing army our Cavalry follows as a corollary thereto. Otherwise we shall be at a disadvantage, especially if the enemy has a numerous Cavalry. Every thoughtful Infantry officer who has participated in a large maneuver without the support of Cavalry will confirm this statement.

What are these qualities of Cavalry that make it indispensable?

After it has arrived, by rail or steamship or truck,

as referred to before, at a point a few miles from the enemy or a few miles in front of our own army, its qualities come into play. It now gets off the main roads and can move rapidly in any terrain.

The mobility that is claimed for Cavalry is mobility on the battlefield or in the nearby field of maneuver. In this zone the horse is the fastest means of maneuver and advance upon the enemy. On certain very suitable terrain, tanks may exceed this speed, but not in general. When supported by its own means of powerful fire and sometimes by the assisting fire of other troops, the mounted attacks by Cavalry in successive thin lines of mounted skirmishers have been proven in the last wars to be very formidable and less costly, when well timed, than prolonged fire fights on foot. In visualizing a mounted attack, most persons think of the Cavalry attacking in inferior numbers against a superior foe. Whereas, when thinking of an Infantry or dismounted Cavalry attack, they realize that superior numbers are necessary. Give this same superiority in numbers to the mounted attack, and we have a different picture.

It has been stated that, because of improvements in modern weapons, the horse can no longer be considered as a weapon. But the American Cavalry is many jumps ahead on that idea. For many years the horse as a weapon has had no part in the calculations of those who formulated the present Cavalry tactics. Although the weight and speed of the horse has still some shock effect, this has not been counted upon by those who formulated the present doctrine in the Cavalry concerning the mounted attack. The words SHOCK and CHARGE were carefully avoided in all instruction given at the Cavalry School and in all regulations prepared there during the four years following the World War. However, some thoughtless persons have reinserted these words in the regulations. The reasons for omitting these words were that, to most persons with superficial knowledge of Cavalry, they convey an impression similar to that conveyed by the famous picture of "The Charge of the Scots Greys at Waterloo" and other paintings of Cavalry charges. Solid ranks of men and horses massed together, and rank following rank with scarcely a few yards distance between them. This is the idea of Cavalry in action still prevalent among many persons.

But this idea was given up by our leaders in Cavalry thought many years before the War.

The term *Mounted Attack* was substituted so as to convey an entirely different picture. The true picture is a similar formation to that of the Infantry in modern attack. Irregular lines or waves of mounted skirmishers deployed with intervals of five or more yards between troopers. Wave succeeding wave, so as to produce the necessary numerical superiority when the enemy is reached. This is the same principle used by the Infantry, and it enables the attackers to hurl a sufficient number of men upon the enemy without subjecting them to losses that would be certain if large numbers were crowded into the front rank.

In this mounted attack the shock of the horses is not relied upon, although it will be present to an appre-

iable degree. Reliance is placed upon the weapons carried by the troopers, the principal one being the very effective automatic pistol, which can be fired to the front or right or left front with astonishing accuracy from the back of a horse. Reliance is also placed on a powerful supporting fire which the Cavalry has within its own means and which is increased if the Cavalry is supported by Artillery and by Infantry in that beautiful cooperation or team work that should exist between the branches of the service.

Here, also, the cooperation of a Mechanized Force with the Cavalry would come into play. This force might not only lend the support of its fire elements from a stationary position but, in addition, its mobile fire elements, such as the light tanks, might accompany the mounted attack in some form yet to be devised.

The term, *Mounted Attack*, further implies that it is not a ponderous mass relying upon the shock of its horses like a great avalanche or the charge of a herd of buffalo, but a swiftly moving, sinuous and evasive succession of individual warriors who possess automatic firearms and know how to use them at close quarters. It conveys the idea of an attack that may sweep through the enemy's lines or may terminate by the troopers leaping from their horses and engaging the enemy hand to hand. Losses are reduced by its loose formation like that of Infantry and by its speed in closing with the enemy. They are further reduced by whatever supporting fire can be given by Artillery or by other troops from a stationary position. This is not a purely visionary picture. It has been given the acid test and has come out a sound principle.

So, it is upon the Mounted Attack, not the Charge, or the Shock of horses, that we rely.

But the Cavalry has still another powerful alternative upon which to rely. It can attack or defend dismounted. The Cavalry has now more fire power per man than any other branch. Especially in the important task of delaying enemy forces, this powerful fire action and capacity for dismounted fighting will be most useful. Successive positions for such delaying actions at the head and on the flanks of an enemy column can be taken and abandoned with great rapidity because of the facility for moving across any country. And this facility will be more general than in the case of a Mechanized Unit acting alone.

Undoubtedly a Mechanized Unit could assist greatly in such tasks, sometimes acting even alone. But its radius of action across country will often be very limited.

Before anyone, be he soldier or civilian, is competent even to venture an opinion as to the substitution of armed machines for Cavalry, he should have a considerable experience with small units of Cavalry in training and in maneuver and, if not actual experience in war with these units, at least a thorough knowledge of the history of Cavalry. It is the small units that compose any larger force which determine the practical value of any arm of the service.

Such an experience and such a study will convince

the most skeptical, if he keeps an open mind and is really in search of the truth, that Cavalry is more useful now than ever before in its history; provided, of course, that it is armed and organized and trained in accordance with our most recent ideas.

The tremendous fire power that has been developed through the agencies of Artillery, machine guns, light cannon, and bombs, both on the ground and from airplanes in the air, makes it possible to smother temporarily and for a very brief period the greater part of the fire of enemy forces in a fixed position. Supported by such a fire, the attackers, if moving very rapidly, can get across the intervening ground and close with their opponents before they have had time to recover fully from its effects. It is partly because of this that Cavalry can attack successfully over open ground that would be impossible to foot troops. In all theaters of the recent war this was proven whenever the mounted attack was properly organized and timed. There are literally dozens of such actions recorded and available to the student in historical research.

Thus, instead of ruling the Cavalry off the battlefield, the modern fire arms have helped to make it more useful than ever before. Attacks by foot troops, whether Infantry or dismounted Cavalry, must be confined to ground where it is possible to advance upon the enemy by skillful use of cover; because, when the supporting fire can no longer smother the enemy, the foot troops *if exposed* are subject to the same kind of powerful fire and are too slow to bridge over this period without destructive losses. They must, therefore, be able to arrive at the assaulting position without too much exposure. On flat, open ground this is impossible. It was for this precise reason that tanks came into play during the last war. They were able to go through barbed wire entanglements and other artificial obstructions and thus, when backed up by Infantry, became very useful for trench warfare attacks with very limited objectives. As soon, however, as the objectives become distant, the tanks must wait for supporting troops. On such a mission Cavalry does not have to wait for supporting troops. It can hold the ground it has won for several hours until Infantry can arrive; or, if it is delaying action that is required, it can hold till the delay is effected and it is able to make the necessary arrangements to get away. The more it becomes necessary to move across country rapidly to avoid losses, the more useful the horse becomes. If the Cavalry finds good cover for its advances, so much the better. But, if there be no cover, it is the only arm that has a chance to advance without destructive losses. Repeated experience has shown that the horse on the battlefield is not only possible and practicable but indispensable, not only in the ranks of the Cavalry but also as mounted messengers (often the best means of communication), in Horse Artillery, in machine gun units, and to mount commanders and staff officers when their automobiles can go no farther. The horse can still remain on the battlefield and will remain as long as men engage in open warfare.

The Air Forces may complete the distant reconnaissance. Only the close-in reconnaissance remains to be done by the Cavalry. It operates by day and by night. It trickles through woods and across creeks that would long delay a Mechanized Force, especially by night. It is the least vulnerable force to the attacks of hostile airplanes, because it can scatter quickly and continue to move while so scattered. A Mechanized Unit is one of the most vulnerable to air attacks. Machine gunners or riflemen transported in trucks are especially good targets for the airmen. Tanks of gas and oil, so necessary to move a Mechanized Force, are easily riddled by machine gun bullets or hit by bombs dropped from the air. Antiaircraft defense will of course be present, but any success of the airman will be far more effective than as against the Cavalry which may lose a man or a horse or two but goes on. The Cavalry can get into places for observation impossible to machines.

After the reconnaissance and during the ensuing battle the Cavalry may be assigned to one of a number of rôles or missions. The most important of these are attacks on the enemy's flanks and rear at the right time to coordinate with the Infantry action, but not just at will; striking at the sensitive spot in the enemy's line at the critical moment, usually about the time reserves are put in to complete the victory; delaying actions against enemy reserves, so as to keep them out of action at the critical moment, usually to gain time to find and use our own reserves; pursuit of a routed enemy.

The enemy's Cavalry, perhaps reënforced by a Mechanized Force, will attempt to prevent our Cavalry from performing these missions and may have to be beaten first.

Probably the most important of all Cavalry missions is the delaying action against enemy reserves. By keeping the enemy reserves out of action for a period of time our own reserves may take advantage of the opportunity to clinch the victory. Now, in order to accomplish this mission our Cavalry must be able to move rapidly across country of any kind, to continue the movement in spite of attacks by the enemy air forces, to make mounted attacks on outlying security detachments so as to avoid delay, to protect itself from ambuscades or surprises by the enemy or from surprises as to the nature of the ground, and to do this while moving rapidly towards its objective. This protection is attained by using covering detachments moving ahead by rapid bounds. Finally, it must be able to make both mounted and dismounted attacks upon the enemy reserves. All this is possible in any kind of country. And when the country is suitable, Mechanized Force will be of great assistance.

But could Mechanized Force be depended upon to do this alone? It is very doubtful, very improbable. As pointed out above, Mechanized Force can be delayed by hostile Air Force, it can meet insurmountable obstacles in the nature of woods, creeks, rainy weather, rough mountains, etc. If not one, then perhaps another of these things. Reconnaissance in front of Mechanized Force is impossible by its own means, except

by armored cars which can operate on roads or near them and which are easily ambuscaded and captured by the enemy if too bold.

Finally, when the Mechanized Force reaches its objective, the enemy reserves, it can make one attack and it is through. It may succeed for the moment but not for long without the support of Infantry or Cavalry.

One of the situations wherein Cavalry may be sent to delay enemy reserves, is when our Infantry has made a break-through and a wide gap is created. Cavalry may be sent through the gap for a considerable distance to meet the hostile reënforcements. On such missions the enemy, unless already routed, will attempt to surround and destroy the Cavalry. Vivid descriptions of such situations are found in the annals of war. To escape, after having performed its mission, is sometimes very difficult for such a Cavalry force. Bold cross country riding, both by day and by night, and sudden and surprising attacks to cut its way through become necessary. A Mechanized Force in such a situation will probably become helpless.

The trouble with persons who think too optimistically about Mechanized Force is that they fail to realize that it can be stopped at all. Whereas, it can be stopped by Artillery, or light cannon or heavy machine guns of large caliber. It may be neutralized by hostile Mechanized Force. It must have Cavalry or Infantry support. While the tanks, or combat cars as they are to be called, are not vulnerable to ordinary 30-caliber bullets, they are very vulnerable to the fire of light cannons and heavy machine guns. The soldiers who are organized as machine gunners or riflemen to support the light tanks and who are carried in trucks moving by wheel and track are very vulnerable to air attack until they detruck and deploy. The physical exhaustion incident to moving across country in either tanks or these adaptable trucks is very great and cannot be prolonged. When we see these machines in an open field going through evolutions at great speed and spurting forth red streams of fire from their machine guns, they look very formidable. But their fire is very inaccurate and after even a successful attack they must be supported by Cavalry and Infantry. The soldiers mentioned above, who as machine gunners or riflemen are travelling in adaptable trucks, are not sufficient. Besides, they cannot go in that way with the tanks across country on distant missions because of their vulnerability, because of the exhaustion.

Important missions of delay are best carried out by forcing the enemy to deploy the head of his column and then by harassing attacks on his flanks. But a Mechanized Force cannot execute these harassing attacks by bouncing against the enemy sides and bouncing back again like a rubber ball. Cavalry can. The machines are too vulnerable while standing still to fire at a halt, and when moving their fire is inaccurate. A Mechanized Unit is not flexible enough to execute such delaying actions. Perhaps a little delay at first and then they are finished.

Why is this? Because, when tanks make an attack,

they move forward firing rapidly and moving rapidly. As they begin to reach the enemy position, they must be supported by Infantry or Cavalry, because if they halt they are too vulnerable to the fire of Artillery and light cannon and heavy caliber machine guns. They must keep moving. Now this supporting force, organized into the Mechanized Unit and carried in passenger trucks, must detruck to fight or to advance under fire. Their movement then becomes as slow as that of Infantry. They cannot keep up with the fast moving tanks, so the tanks must wait for them. But foot troops are unsuited to harassing attacks, because, once they become engaged, they have difficulty in getting away and must either defeat the enemy in their front or be repulsed with heavy loss while withdrawing. Cavalry is the arm suited for the harassing attacks which form a part of delaying actions as explained heretofore.

Cavalry acting with and supporting fast moving tanks can keep up with them in the attack and can retire with them if the enemy is too strong. Or, if the enemy's position is captured, Cavalry can hold the position dismounted while the tanks and led horses are removed to shelter from Artillery and other fire to which they are vulnerable. The dismounted Cavalry can hold the position as long as may be necessary to bring up Infantry, if that mission is the one assigned them in the general scheme. When this combination of Cavalry and tanks is out alone on delaying action, it is of course not expected to hold any gained position for long.

Of course both Infantry and Cavalry must be armed with light cannon and 50-caliber machine guns to oppose a hostile Mechanized Unit. And this can be and is being done.

Therefore, although it is true that a Mechanized Force, containing within its organization its own troops for the support needed by its tanks, can move on roads for, say, 50 miles or more, faster than Cavalry can march, it is also true that this force needs Cavalry with it after it arrives on the scene of action and when it commences its cross country work. That is to say, when it is assigned the usual Cavalry missions. One can conceive, however, of a number of missions that could be performed by the Mechanized Force alone. These should be studied and practically tabulated. It will be found that, when the most important Cavalry missions are necessary, the Mechanized Unit must wait for the Cavalry to arrive.

The true rôle of Mechanized Force is to support Cavalry. Here it may become very powerful.

As stated before in this article, Mechanized Force needs Cavalry or Infantry to support it. In the contemplated organization of a Mechanized Force, attempt will be made to provide its own support by some unit of machine gunners and perhaps a few riflemen being part of the organization. They will be carried along with the light tanks in trucks that will use wheels on roads and let down caterpillar tracks for cross country work. This will not be successful, except in specially suitable country, because such an organization, referred to elsewhere as soldiers

carried in trucks, cannot keep up with the tanks across country for long distances. This is one reason why such an organization cannot operate very far from roads and why Cavalry must be brought up and made ready to cooperate with a Mechanized Unit when the mission is one heretofore assigned to Cavalry.

If we are going to experiment with Mechanized Force in maneuvers against older arms, then it is only logical to give to the Cavalry which may oppose such a force the organization and armament that it needs. It would hardly be conclusive to deny the Cavalry a chance to experiment with some new arms and equipment while giving all to the Mechanized Unit that is requisite. Let the Cavalry have all the light cannon and heavy machine guns of large caliber that it can handle without loss of its essential mobility; and the packs to carry them. And, when it meets a Mechanized Force of equal numbers of men, it will certainly take care of itself. Take any country or terrain, thought to be ordinary terrain and extensive enough for an illustration of the performance of the more important Cavalry missions, outlined above, and assign a Mechanized Force alone to these missions. The limitations of such a force will become very apparent.

The Cavalry should always be considered as a corps of special troops to be used by the commander-in-chief for special missions requiring troops possessing its characteristics. Like the Artillery it serves to support the Infantry, to relieve the Infantry and to save the Infantry in various situations. The Infantry is the great fighting arm and is subject to greater strain, greater exhaustion and greater losses than any other arm. Every means must be used to save it, and the Cavalry is one of those means. Mechanized Force is simply another of these means; but, if it proves useful as such, this does not indicate that it can replace Cavalry.

A very numerous Cavalry is especially necessary for the American Army for reasons that would take too much space to discuss in an article of this nature. A numerous Cavalry, well organized and equipped with the most modern arms and appliances and with motorized transport, can undertake operations at the beginning of any war that would start us off with great advantages. Even though war could be fought with the sole employment of tanks on the ground and airplanes in the air, as sensational writers would have us believe, it would take four or five years after the opening of hostilities to produce the number of these war engines which would be sufficient to enable us to use them exclusively. But we should wish to gain early successes and to finish the war quickly. This could not be done without a numerous Cavalry, armed, equipped and trained to fight either mounted or dismounted under the most modern conditions. The rôle of any Mechanized Force we should have should be to support this Cavalry.

Minor campaigns or small military operations that our country has engaged in could have been completed probably in one quarter of the time and with about

the same number of men, had a sufficient force of Cavalry been sent at once to the scene of action.

And yet our Cavalry, so necessary at the outset, is so reduced as to be almost ridiculous. At present we could not form more than eight or ten squadrons at war strength and ready to move at once. Considering even the present reduced size of the army, we should have not less than 10,000 Cavalry, not including the overhead for schools, civilian components and other drains on effective units. This number should be multiplied in any mobilization plan.

Whatever may be the desirability of experimentation with Mechanized Force, our first need is more Cavalry, not less.

Those persons who are given to superficial observation and investigation and to superficial thought are always sliding off on tangents to a true course. With the development of fast moving machines have come attacks against the Cavalry arm by those who can see nothing but the machines. Such persons are led astray because of the absence of any intimate knowledge of Cavalry employment and its preparation for such employment.

First, some thirty years ago, it was to be men on bicycles who were to replace the Cavalry. The absurdity of this soon became apparent. But the controlling idea of those who propose to substitute machines for Cavalry horses has ever been to increase the speed of marching troops on roads, forgetting that the outstanding characteristic of Cavalry is not its speed in marching on roads but its speed and flexibility in cross country work in the field of maneuver and on the field of battle.

Then, the Air Force was to replace the Cavalry. The idea being that since the horse soldiers had been "the eyes and ears of an army" and since the airplane could take over this rôle, there was no more use for mounted troops. Again we see the failure to understand that reconnaissance, important as it is, has never been the most important rôle of the Cavalry. To strike at the sensitive spot in the enemy's forces at the critical moment and to keep his reserves out of action are and have been, since the time of Napoleon, the great rôles of this arm. Reconnaissance has been imposed always upon it, and now that the distant reconnaissance is largely taken over by the Air Force, the Cavalry is relieved of a great part, though not all, of this exhausting duty and can be better saved for its great rôles. These facts have become apparent gradually to all, after many foolish suggestions that Air Force should replace mounted troops.

And now we slide off on another tangent, and this time it is Mechanized Force which is to replace the Cavalry.

Always, these tendencies are manifest among professional writers, journalists, inventors, and others who publish their views to a public eager for sensational news. Unfortunately, even those officers of the Army who have only a superficial knowledge of Cavalry are led away from historical facts and straight thinking.

After all is said, there is more ignorance and less

expert knowledge concerning Cavalry than in the case of any other arm of the service.

Some officers see in the Cavalry only a mounted Infantry using horses merely to increase its mobility to something like two or three times that of Infantry in route marches. Others see only an arm trained and held in readiness for an opportunity to charge in solid ranks and, perhaps, performing some reconnaissance in the meantime.

Neither of these conceptions is correct. But the Cavalry itself, especially European Cavalry, is somewhat responsible for these misconceptions. For a good many years before the great war, the true rôle of Cavalry had been forgotten. Therefore, little thought had been given as to how the Cavalry should be organized, armed and trained to perform this true rôle in the face of modern developments in other arms. The European Cavalry was trained to execute reconnaissance without taking into consideration that to do so successfully it had become necessary to fight Infantry as well as Cavalry, and that changes in both mounted and dismounted attacks were necessary. When the great war came, the Cavalry found itself poorly equipped to meet unforeseen conditions. Although it performed invaluable services, it did so under great and unnecessary disadvantages. And its true and great rôle was forgotten by almost all high commanders as well as in the Cavalry itself. Its dismounted fighting was performed with great gallantry, although poorly equipped and trained for such work. After a few costly attempts to charge in close order, mounted attacks were discarded. Of course, the war in trenches that was resorted to by both armies on the Western front was responsible for the failure to develop a correct mounted attack, until the latter part of the war when some progress along this line was made.

The British Cavalry in Palestine and also in Mesopotamia found itself at last and opened the eyes of its observers to the possibilities of Cavalry action under modern conditions. And General Allenby, in conducting a campaign which, had there been no war in France, would have attracted the most intense interest of the world, gave demonstration of the proper use of Cavalry and of the importance of having always available a relatively large force of this arm. During those campaigns the British Army in Palestine had four Cavalry divisions and from five to seven Infantry divisions.

Had the Germans possessed the true conception of the use of Cavalry, the German Army might have entered Paris in the early weeks of the war in 1914. Again, in 1918, when the Germans had nearly broken through between the British and the French Armies, a Cavalry corps, trained properly and used rightly in attacking the French and British reserves, might have prevented the stopping of the gap until German reserves of Infantry had been found and moved into the gap to exploit their victory and to bring about the great decision of the war in their favor.

Similar opportunities occurred on every front. But no, the paramount rôle of Cavalry had been overlooked in the military world for many years, and no genius

arose to the supreme command on either side to break away from the existing attitude towards it. And even had the high command on either side possessed the true conception, it would have found no Cavalry in Europe equipped and trained properly for its great tasks.

It is not surprising, therefore, that at the present time we find so many suggestions among both military men and civilians that Cavalry might be replaced by men carried in armed machines. Those who differ with such views are liable to be classed as ultra-conservatives and "old fogies." But if these same men had possessed the correct ideas and been in position to insist upon them before the great war, they would have been classed as radicals.

It is believed that the doctrine taught now in the American Cavalry is essentially correct. It includes both mounted and dismounted action. It insists upon deployment, laterally and in depth, for both types of action. It demands great fire power within all Cavalry units, not only for defense but, also, to support the advance of both mounted and dismounted riflemen. It requires that all riflemen be trained to advance dismounted to the attack without undue exposure; that is, by stealthy approach and skillful utilization of cover afforded by accidents of the ground, no firing positions established or any exposure permitted for this purpose until within two or three hundred yards of the enemy's position; no halting on open or exposed ground; fire support by machine guns, and artillery if available, to be constant and powerful until the riflemen take up the firing themselves at very close ranges. It requires leadership of a very high order by platoon and squad leaders in both mounted and dismounted action. It requires an armament and training for protection against observation or attack by hostile aircraft or hostile mechanized force. It specifies that the various rôles of Cavalry are much the same as heretofore but that the

paramount rôle is to support the Infantry by attacking at the critical moment at the sensitive spot in the enemy's organization or against his reserves. It indicates the automatic pistol (supplemented by the sword if, for lack of ammunition or other reasons, the pistol cannot be used) as the principal weapon of the mounted trooper. It requires that a skillful and uniform method of marching shall prevail as one of the great essentials in Cavalry training and operation. And, lastly, it requires bold and skillful riding across all kinds of country.

Many items might be listed as necessarily included in such doctrines, such as reconnaissance and the necessary training in patrolling to perform it. But this would serve merely to list all the innumerable little items of training that are necessary.

It is difficult to state what is doctrine and what is something else. But it might be pertinent to state, in addition to the above, that our Cavalry believes that mounted action, properly supported by fire, against an isolated force of the enemy, is more decisive and less costly than dismounted action if the Cavalry force is large enough to attack at all. Superiority in numbers is usually necessary to attack dismounted against an enemy in position. With that superiority, a combined dismounted and mounted attack is considered as the best method unless the ground and certain accessory defenses should forbid. Small forces of Cavalry should beware of dismounting, but should try either the one or the other without attempting to combine mounted and dismounted action.

With these doctrines and the necessary numbers, equipment and training, our Cavalry would be prepared to give services of inestimable value. Air Force and Mechanized Force working in cooperation with Cavalry, and motor transport bringing up supplies so difficult in the past to obtain for Cavalry, would combine to bring about the most brilliant successes.



The Tactics of Bush Warfare

By Major Roger W. Pearn, U. S. Marine Corps

PROBABLY the greatest shock received by any officer on his first tour of expeditionary duty in the West Indies, Central America, or other similar duty in any part of the world, where in time of peace he encounters actual guerilla warfare, is his apparent inability to apply directly to each situation those principles of war which have been so diligently instilled into him by the instructors of our various service schools and by study of historical precedents.

The very nature of the enemy's tactics drives us to somewhat similar methods. The enemy forces are usually guerilla or bandit groups, these groups consist of from twenty to seventy irregulars, and at best are indifferently armed. The enemy has no regular lines of communication and supply. The enemy has no permanent strongholds or other prepared bases of operations. As a result we can not hope to attack any fixed objective or use any carefully prepared plan of maneuver. Hence, for the offensive, we must adopt methods that are somewhat similar. When we take the offensive and put on the trail combat patrols of any size whatever, no one can foresee the moment when our avowed offensive may switch in an instant into the grimmest sort of a life and death defensive.

We have regular garrisoned towns, outposts, routes of supply and communication, etc., to protect and maintain, while the roving nature of the enemy forces, living off the country as they regularly do, permits them to concentrate their entire force, when and where they will, to attack or harass our garrisons, supply trains and patrols, as they may deem advisable; to start the action at the time and place most favorable for them and to break off contact whenever the fire fight becomes too heavy and they have inflicted the maximum of damage on our forces, and with little or no danger from any pursuit we may be able to launch, due to the almost impenetrable tropical forests, rough terrain and total lack of roads, other than foot paths.

The bandits' superior knowledge of the terrain, operating as they do in unmapped, outlying parts, sparsely populated, and with the sympathy and information system well perfected among friendly non-combatants, makes it indeed fortunate that we are able to compensate somewhat for our lack of numbers by our superior armament, training, morale, and education.

The trails and so-called roads in these outlying parts are indescribable; unless once seen and traversed, they are difficult to visualize, even if an adequate description were possible. They are impassable except for foot troops, mounted infantry, pack animals, and bullock carts, and the latter can only negotiate those roads shown on the unreliable native maps as "improved." Practically all troop movements must be made in single file.

It is very evident to interested observers over a period of years, that these formerly ignorant and untrained bandit forces are steadily improving, both as to armament and training. Their morale is an ever varying item to be carefully estimated from each special situation as it arises.

All troops operating in the rainy season, as well as troop convoys for supply trains etc., are mounted on native animals whenever mounts are available. Dry season operations include more foot troops, but even then, the men's blanket rolls are carried on pack animals, the soldier carrying only his arms and fighting equipment.

In our most recent operations in Nicaragua from 1927 to date, we find ourselves often encountering leaders of considerable military training and experience, whose troops are well armed with up-to-date rifles and ammunition, machine guns, Thompson sub-machine guns, and bombs and whose campaign is not restricted by any rules of civilized warfare, while our actions are always subject to the closest scrutiny of ambitious publicity seekers and over-zealous pacificists in the United States, which requires our campaign to follow strictly the recognized rules of land warfare, to the protection of which these unscrupulous guerillas have no shadow of a legal right.

As the last Nicaraguan campaign has furnished the most extensive operations of bush warfare in recent years and has been conducted under the most adverse conditions of climate and terrain, a more detailed account of these operations may be of interest.

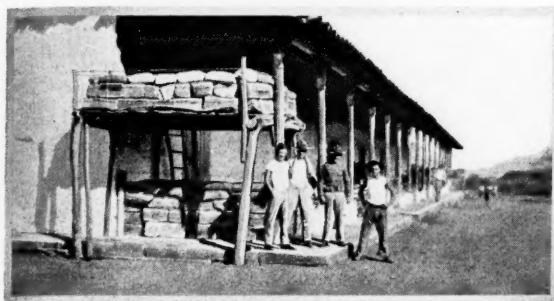
Occupation and Defense of Towns with the Primary Mission of Denying Such Towns to the Bandits

This form of occupation became necessary in Nicaragua in the summer and fall of 1927, for the reason that our available troops were insufficient to completely occupy the entire country, but the protection of the citizens of Nicaragua, foreigners and established business, in the various cities and towns, was essential. Furthermore, our forces had not yet been committed to a definite offensive, and the newly formed constabulary had not yet reached a sufficient size to take over operations of any magnitude. Our delay in taking up a definite offensive was largely based on the continuing effort of all concerned to induce all possible bandits to accept immunity and lay down their arms. This effort was pursued diligently for some time after the expiration of the time limit for disarmament as set by the Stimson-Moncada Agreement.

As the bandit operations in 1927 were confined almost entirely to the Northern Area, it was unavoidable that some sort of protection be given the law-abiding

These minor warfare tactics are the author's opinions and are based on expeditionary duty during the last fifteen years. The author is an instructor in these tactics at the Marine Corps Schools.

citizens of this area and their commercial interests. Thus the original occupation of Ocotal, Jicaro, Somoto, Pueblo Nuevo, San Fernando, and Telpaneca, was accomplished by small detachments of marines and native troops, which were insufficient to control the surrounding country or rid it of bandits. Prior to Sandino's concentrated attack on Ocotal in July of 1927, and as



Machine gun emplacement, with protected sniper's post above. Norvil Barracks, Somoto, Nicaragua.

late as November of 1927, this policy remained in effect. Every effort was made to rid the country of armed irregulars without bloodshed, for humanitarian reasons as well as military necessity, since our forces were insufficient in number for a complete occupation of the area. We were greatly overextended and without adequate lines of communication.

At this time all supplies not obtainable locally, had to be hauled from Managua to Esteli by bull-earths, a distance of about eighty-five miles, and thence north to all other posts by pack animals. In some cases the pack animal route was over one hundred miles from Esteli.

At this time the Marine Air Force consisted of only five old wartime DH two-passenger planes. When they had completed their regular hazardous missions of communication, combat and photography, they had little time or ability to help out in the supply situation.

In all towns occupied in the Northern Area of Nicaragua, bullet proof adobe buildings had to be procured as barracks. Tents were unsatisfactory in the rainy season; their procurement by bull-earths would have taken up valuable cargo space, which was already inadequate for supply purposes, and quartering troops in tents would have invited sniping and night attacks. In some instances, inactive Catholic churches had to be utilized as barracks.

Every member of these garrisons was assigned a definite battle station and a sector of fire; men were thus trained until battle stations could be occupied in utter darkness in a very few seconds. Their training along these lines was largely responsible, in my opinion, for the successful defense of Telpaneca, to be discussed in detail later.

This period ended about November 1, 1927, at which time a definite offensive mission was assigned to all troops in the Northern Area.

Surprise Attacks by Bandits on Garrisoned Towns

There were two outstanding examples of this class of warfare in Nicaragua that deserve detailed accounts.

Attack on Ocotal: At 1:00 A.M., on July 17, 1927, the bandit forces combined under Sandino and attacked Ocotal with a force of about six hundred men. Sandino issued a written attack order definitely assigning the duties of each group. These groups consisted roughly of about seventy-five men each and had separate leaders. An original copy of this order later fell into the hands of the marines.

The defending troops at Ocotal consisted of thirty-five enlisted marines with two commissioned officers, and forty native soldiers of the Guardia Nacional with two American officers. The marines had one Browning machine gun and two Browning automatic rifles, but no Thompson machine gun, no rifle grenades, no hand grenades of any kind, and no trench mortars or 37-mm. guns. The guardia garrison had one Lewis machine gun and nothing else but their Krag rifles. The ammunition supply of all troops was inadequate for a prolonged siege.



Sketch No. 2.

Garrisoned towns (1927-1928) of the Northern (bandit) area of Nicaragua, showing trails connecting these garrisons, and route of supply overland from Managua.

Both garrisons, marine and guardia, kept up an intense defensive fire until daylight but were unable to sally forth in the dark and close with the attackers, as their numbers were only sufficient to protect their

barracks buildings, the attacking force so greatly outnumbered them.

At daylight, the attackers occupied protected sniping posts completely surrounding both barracks buildings and had one machine gun in the belfry of the Catholic church about seventy-five yards from the marine barracks. Their plan was to hold the garrisons in their quarters until night and then renew the attack, as the attackers had a healthy respect for our marksmanship and made no pretense of an open daylight attack. Their well-chosen and protected sniping posts and their superior numbers made it suicide for the garrisons to attempt a daylight counterattack.

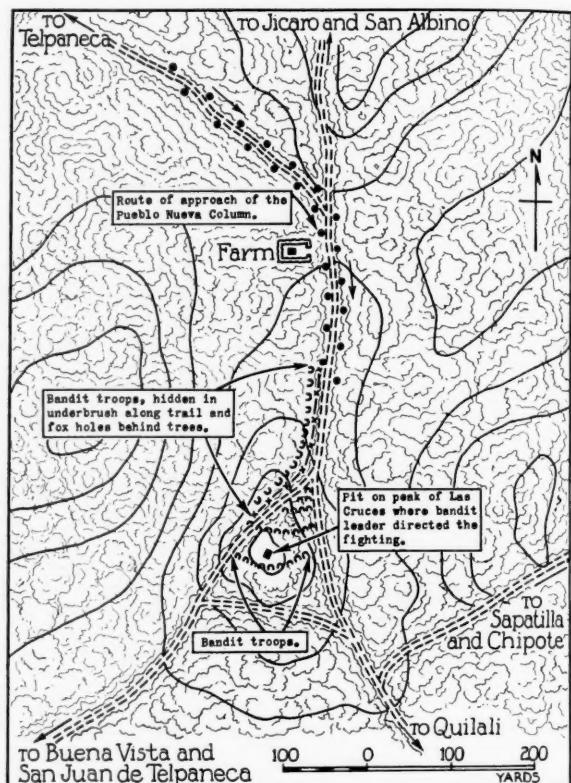
Either by chance or careful planning, the bandit attack occurred on Sunday, the only day of the week that regular airplane trips from Managua to Ocotal were not scheduled. Purely by chance, two planes on a photographic mission were sent to Ocotal on the morning of July 17th and immediately returned to Managua with news of the siege. About 3:30 P.M., five combat planes reached Ocotal with a capacity load of bombs and machine guns. Their targets were like a moving picture scenario; most of the bandits had withdrawn to the edge of town to hold a consultation concerning the operations for the coming night and were bunched, several hundred of them, in a deep high-walled river bed. The planes were able to drop all their bombs before the attackers could leave this ravine; then the planes chased them over the country trails, ground strafing the bandits until all machine gun ammunition had been expended. The airplane casualties were estimated at two hundred bandits and completely broke up the siege.

Shortage of ammunition, lack of auxiliary weapons, and the overwhelming numbers of the attackers would have placed the defending troops in a very bad situation the second night, had these planes not arrived as they did.

However, contrary to the general belief and to published articles on this subject, the battle of Ocotal was the only action in Nicaragua in which airplanes were the deciding factor or even essential from a purely combat standpoint. The bandits had learned their lesson, and future attacks on towns and the ambushing of patrols on the trail, etc., were always commenced and broken off before the planes could reach the fighting.

Attack on Telpaneca: It is interesting to note the facts leading up to this attack. After the battle of Ocotal, Salgado, one of Sandino's leading sub-chiefs, split with Sandino and withdrew to Somoto with about seventy-five men. This was before Somoto had been occupied by our troops. Salgado was disgruntled because Sandino had called him by the title of "Colonel" in his attack order for the Ocotal battle, instead of "General"; however, upon leaving Sandino, Salgado stated he would not fight for a general who could not win battles. After the marines occupied Somoto, that area became too hot for Salgado; he had lost several men killed and wounded, and there had been considerable desertion from his ranks until his force did not number more than about thirty. Salgado was a typi-

cal negroid-indian type, untrained in modern warfare but cunning and experienced in bush warfare. Those who knew him personally said he could be recognized anywhere, as he was an exact counterpart of the Indian head on our American five-cent piece.



Sketch No. 3.

NOTE: The top of Las Cruces Mountain was sparsely weeded. Large pine trees had fox holes dug behind them that afforded an excellent field of fire along the trail from the north.

Bandit positions on west of trail behind barbed wire fence, were in a drainage ditch about three feet deep and ditch was not visible from the trail on account of heavy brush.

Bandits were finally driven off by well directed machine gun and trench mortar fire from farm yard surrounded by a low rock wall, about three hundred yards north of the peak of Las Cruces.

We later learned from native sources that, when Salgado rejoined Sandino, he asked Sandino for a chance to show him how a successful attack on a town should be made.

At 1:00 A.M., on October 19, 1927, a bandit force of three hundred men under Salgado, attacked the marine and guardia garrison at Telpaneca, which consisted of twenty enlisted marines and twenty-five enlisted guardias, with only one marine officer present, commanding both detachments. It will be noted that 1:00 A.M. was also the exact hour the attack on Ocotal commenced. The hour chosen for these attacks was sufficiently late in the night to permit the garrison to get well settled for the night and early enough to permit the attackers to have several hours of darkness in which to carry on the attack before daylight. Whereas the Ocotal attack was launched in bright

moonlight, Salgado chose a very dark and foggy night for the Telpaneca attack. Partly on account of this darkness and fog, the attackers were at the doors and windows of the barracks buildings and the officers' quarters, pouring in an automatic fire, when first discovered. On the night of this attack, the officer in charge had taken special precautions and had posted two sentries on each post, but the bandits completely eluded these double sentry posts and launched the attack as a complete surprise. Had the bandits withheld all fire, entered the buildings and attacked with machetes only, I believe their chances of success would have been much better. In this connection, the advisability of double sentry posts is well worth considering. While the assignment of two men to each post under conditions of severe nervous strain does alleviate this strain on the sentries, I believe that it also decreases their alertness; they are too prone to be careless and while away in conversation the time that should be employed in strict observation; it would appear preferable to double the number of posts and decrease their size accordingly, thus assuring increased alertness over a smaller post for which each sentry is entirely responsible.

Within an incredibly short time and in utter darkness, all men of the garrison were at their battle stations; the one machine gun, from a well-protected emplacement, was delivering a steady traversing fire over a prearranged and maximum field of fire. The garrison was well supplied with hand grenades and automatic weapons, and, after the bandits' failure to capitalize to the utmost their surprise attack, their efforts became steadily less effective and more costly, until daylight forced them to withdraw about 4:30 A.M. Except in carefully prepared ambushes along the trails where ample cover was available and practically no clear targets were presented to the ambushed, the bandits never showed an inclination to fight in daylight against the superior marksmanship of the marines and the well-trained native troops.

During this Telpaneca attack, the bandits made a concerted and well planned effort to induce the native troops to mutiny, by offering immunity, money for their arms, good positions in the bandit army, and by using a continuous stream of well thought out propaganda against the Americans. Their efforts along this line proved a complete failure. It is believed that the loyalty of native troops generally is directly dependent on their liking for and confidence in their officers. In this case, the one officer present was a first lieutenant in the Marine Corps who held a commission as a captain in the guardia and was extremely popular and efficient.

The attack on Telpaneca was the second and last attempt by Sandino's forces to attack garrisoned towns. His second failure with severe losses taught him a lesson, and thereafter his entire campaign concentrated on ambushing patrols on roads and trails.

An amusing incident of this Telpaneca attack occurred about a half hour before daylight; the guardia soldier in charge of the corral and pasture slipped out in fatigue clothing without informing anyone as to his

intentions, his interest in his mules entirely obscuring or overcoming the personal danger involved. He secured nine of his best mules from a nearby pasture; drove them nine miles on foot to a friendly farmer; hid the mules and continued on foot the balance of the forty-five miles to the nearest post, to bring in the first information of this attack, six hours before this information was received from any other source. His exploit permitted a relief column to be formed and well on the way before the airplanes or telegraph brought word of this attack. Telpaneca had no radio, telegraph, or telephone communication, and was entirely dependent on mounted patrols and airplanes for its communications.

After the attack on Ocotal and Telpaneca both, rumors were received from apparently reliable native sources that a second attack would be forthcoming, but such never materialized.

Surprise Attacks on Bandit Camps

Our first successful attack of this nature in Nicaragua occurred in the first part of October, 1927, when a patrol of twenty-five marines from Somoto, after traveling all night in a rainstorm, attacked a bandit group under Santos Lobo, at Mal Paso killing seven bandits and capturing a large number of rifles, animals, stores, etc.

For this kind of attack, reliable native information is essential. Due to the large number of bandit sympathizers among the non-combatant civilian population and fear of reprisals among the few friendly natives, reliable information was extremely difficult to obtain. As the number of our troops increased and the bandit operations grew less successful, this avenue of information improved, until several posts had on their payrolls from two to four native intelligence agents, who were able regularly to penetrate the bandit camps and return with definite information as to the location of the bandits. The difficulty of attacking bandit camps was increased because they were constantly being moved; the bandits scarcely ever camped for more than two nights in the same place, and such information has to be fresh to be of any use.

It was found necessary for our troops to always travel at night and only for such distances as could be traversed before daylight, if a surprise attack was contemplated. Any daylight travel was immediately known to the bandits; their spies were numerous, and even our preparations for the night travel had to be delayed until the native inhabitants of the garrison town had retired for the night. The garrisons at Pataste and Telpaneca were particularly successful in such operations, their native intelligence service being excellent and their officers energetic.

This warfare was particularly effective on the morale of the bandits, as these bandit groups after an attack lost more men by desertion than they had by casualties in the attack itself. In these surprise attacks, we never had a casualty; even when their force was far superior, the bandits' one thought was to get away safely, when taken by surprise. They seldom waited to ascertain the size of the attacking force.

Summit of
Chipote Mt.

Bandit store-
house

N

S

Summit of Chipote
Mountain. Bandit po-
sitions entirely hid-
den by woods, disclos-
ed by hostile fire.



Valley of the Jicaro and
Murra Rivers, looking north
from Quillali. Chipote on
the right, Sapetillal Ridge
on the left.

Main position of bandits
on western slope of Chipote

Fox holes and earth
work near house

Suspicious

Western slope of
Chipote Mountain.
Terrain is seldom
found so open.

HOMEMADE bandit
dynamite bomb, loaded
with broken glass,
nails, and metal slugs.

Note how clouds rest on
mountain tops, usual condition
making serial photography
difficult.



The morale of the enlisted men in the posts, where these successful operations were numerous, mounted with each success until the men complained to their officers if many nights passed without a patrol to make, and this in spite of the inclement weather and strenuous marches involved.

In the fall of 1927, Sandino divided into districts all territory not occupied by marines and guardia. He gave definite boundaries for these districts and placed a certain sub-chief with a group of men in charge of each district, with orders not to leave their districts without his permission. These district chiefs, in addition to their combat missions, forwarded supplies to the larger bandit groups. A district chief named Polanco had the district immediately east of Telpaneca, around Pericon. His district was only about twenty miles square. Patrols from Telpaneca, with an excellent native intelligence service, hit his camps at day-break three times in ten days, killing several of his men each time and capturing most of his equipment and supplies. He was afraid to leave his district, as this would have incurred the displeasure of Sandino, and he felt certain his movements were being accurately reported to the marines. When his force of thirty-five had finally been reduced to twelve, he gave up and left.

One post had a cur dog that went out with all patrols. He preceded the patrol; never barked or made a sound, but if he spotted a man, horse, or anything unusual, he made a perfect point* like a well trained bird dog and held the point until the leading element arrived. One morning just before dawn as a patrol was approaching a bandit camp for a surprise attack, this dog pointed a sleeping bandit sentry who was concealed in the brush beside the road and would undoubtedly have awakened and given the alarm when the patrol passed, if the dog had not spotted him and prepared the way for his quiet capture. At night when no patrols were out, this dog walked post with the various sentries. Anyone trying to take this dog with him when transferred to another post would have started a riot or mutiny.

This district plan of Sandino's remained in effect until about January, 1928, when the arrival of an additional regiment of marines in the northern area made it impracticable. He then withdrew most of his troops to the unoccupied eastern part of Nueva Segovia and operated them in larger groups, with headquarters on Chipote Mountain and Sapotillal Ridge.

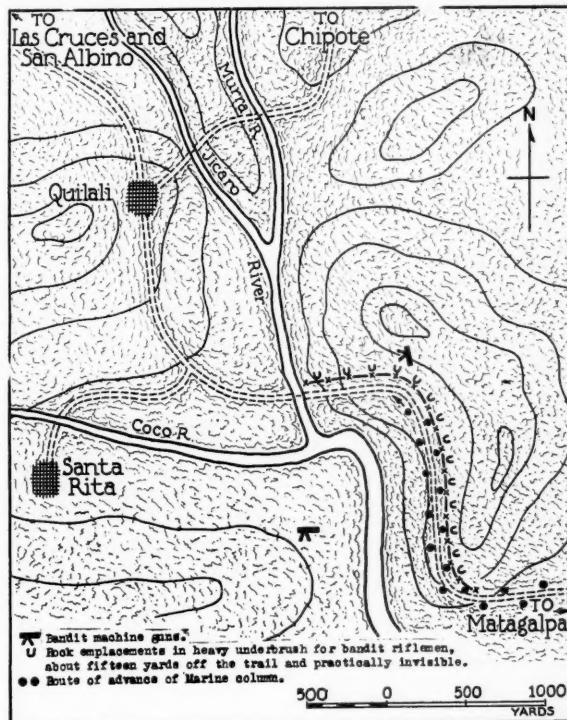
Offensive Operations Against Known Bandit Strongholds

Our occupation of Chipote Mountain and the destruction of all bandit works thereon in February of 1928 is the best illustration of this class of warfare encountered in Nicaragua.

A column of about one hundred and eighty marines and guardia cleared Matagalpa on December 19, 1927, with three hundred loaded pack animals, and was to make a junction at Quilali with another column of forty marines and twenty guardia from Pueblo Nuevo. Quilali was an unoccupied village within about fifteen

miles of Chipote and was to be used as a base of operations against Chipote. This combined force of 240 men and officers was considered sufficient to garrison the village of Quilali, keep themselves supplied by pack train from Telpaneca, and form an offensive force to capture Chipote, with airplane support from Managua via Ocotal. The bandits ambushed the Pueblo Nuevo column at Las Cruces, when, after three days of travel, they were within two hours' march of Quilali. One officer was killed and one severely wounded, leaving a sergeant in command.

In such operations, where the trails traversed force the entire patrol to proceed in single file, through heavily wooded, mountainous and winding trails, the importance of protective fire (reconnaissance by fire) by automatic weapons ahead and to the flanks of the advance guard cannot be stressed too strongly, whenever a possible ambush locality is reached. The results never vary; if the ambush actually exists, the

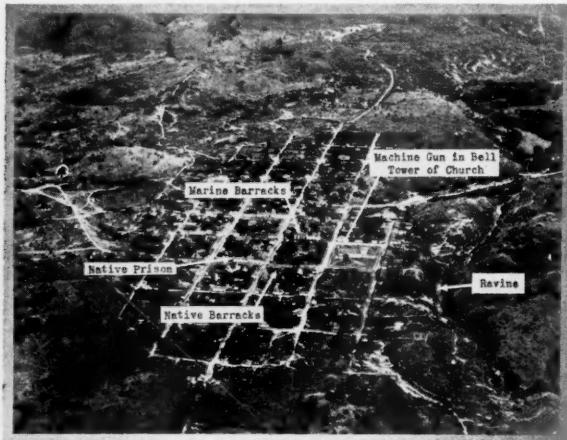


Sketch No. 4.

bandits always think their position has been disclosed and return our fire. If this reconnaissance fire has been properly managed, the ensuing fire fight is always at ranges entirely to our advantage. On long patrols or any kind of a daylight move where a bandit ambush is possible in Nicaragua, the bandits knew our every move and thus the laying down of this reconnaissance fire did not force us to forego the element of surprise, as such did not exist. The main drawback of this plan is the expenditure of ammunition involved. Reserve ammunition must be taken on pack animals and its expenditure closely supervised by an efficient advance guard commander. On such operations you

have only one decision to make: will you expend ammunition or men?

Another unusual factor of operations conducted in single file is that the best results can be obtained by marching the elements of your command without distance. On these winding, hilly, wooded trails, only a



Ocotal.

few of your men can come under enemy fire at any one time and place, and, if your elements are marched with normal distances, one part of your command can very easily and unknowingly reach a position out of supporting distance of the other elements.

A great deal of the terrain in Nicaragua would not permit the sending out of security groups on the flanks, etc. In many cases where this manner of flank protection was possible, it was impracticable on account of the delay involved, as it was usually imperative to reach a certain camp site where water and forage were obtainable before dark.

It is difficult to get away from the large war idea. In these "small time" peace wars, the successful operations are those in which the enemy suffers severe casualties but our side has none. Even one severely wounded man becomes an inconceivable burden to an operating patrol; he has to be taken along on a hand carried litter for the balance of the operation, or the entire patrol must abandon its present duty and convey him to the nearest post. Few patrols can spare sufficient men to safely conduct the wounded into camp and still carry on their mission without delay. The patrol has probably been cut to the minimum for the mission assigned at the outset, as the garrison left behind where the patrol was formed must always remain sufficiently large to successfully defend itself against a concentrated attack of the entire bandit force.

This ambush of the Pueblo Nuevo column occurred about 3:00 P.M. on December 30, 1927. Due to the number of wounded and the size of the attacking bandit force, the column was forced to take up a defensive position on Las Cruces until a relief column could reach them. No troops could reach them in less than two days, except the Matagalpa column which was due to arrive in Quilali late on December 31st.

After struggling through the mud and mountain

trails for twelve days, this large Matagalpa column arrived across the Jicaro river about one and one-half miles from Quilali without having seen a single bandit. Their objective was clearly visible on a small plateau almost within shouting distance. Quilali appeared to be deserted.

At this psychological moment, as the head of the advance guard made a sharp turn in the ridge trail bordering the Jicaro River, an alert marine saw a hat protruding from behind a tree to his left front and within twenty feet of the trail. He gave the alarm, and the bandits opened fire on the advance guard with one machine gun firing point blank down the marine column and another machine gun swept their flank from across the river. After a twenty minute fire fight the bandits were routed, but the marines and guardia had five dead and fourteen wounded. They proceeded to Quilali with their dead and wounded and made camp. The next morning an airplane dropped them a message as to the plight of the Pueblo Nuevo column and a relief patrol from Quilali was sent to their assistance. Late the same night all troops of these two columns were back in Quilali.

Two guardia officers had been killed; the commanding officer of each column severely wounded and several other officers slightly wounded; three enlisted marines and one guardia enlisted man killed; fourteen wounded enlisted men; seventy-five loaded pack animals were missing from the Matagalpa column and a few from the Pueblo Nuevo column.

Brigade Headquarters in Managua now altered the plan for this Chipote operation. Quilali was evacuated and all officers, men, and animals moved to the San Albino Mines. San Albino was now designated as the base for operations of a special combat battalion of marines plus one guardia company. Fresh troops arrived in San Albino from Ocotal to fill up this battalion, and a new commanding officer arrived. Then, operations against Chipote began in earnest.

The guardia company was used for special independent missions, reconnaissance, and scouts. Two marine rifle companies were assigned offensive missions only and were to operate in two columns. One company was assigned the task of keeping up the route of supply, communication, etc., between the operating forces and San Albino. The machine gun and howitzer company was split up and attached to the offensive operations as the situation demanded.

From San Albino to Chipote was only about ten miles, but two large mountains had to be crossed; the trails were the worst sort of foot-paths, muddy, winding, bordered by woods, and through an area that no marines had yet traveled and for which there were no accurate maps. A few native guides were available but their reliability was unknown, and they performed their duties with great reluctance due to the danger involved.

Troops operating towards Chipote moved slowly with all rations, spare ammunition, guns, etc., on pack animals. Outposts over half way to Chipote had been established and stocked with reserve rations before the final drive into Chipote proper was launched.

Prior to our reaching Chipote, the air forces had laid down a half hour bombardment with all the bombs and machine gun ammunition they could carry at one trip. This plane bombardment either drove the bandits off Chipote entirely, or they had voluntarily withdrawn before our arrival, as the occupation of Chipote by our troops was almost without incident, only a few old men and boys having been left behind by Sandino to slightly harass our advance and make us believe Chipote was still occupied. The capture of Chipote was only important in that it existed in the public mind as an impregnable stronghold, this belief having been engendered by Sandino's many boasts in Central American periodicals that no force of American Marines could ever capture or drive him out of Chipote. If made seriously, Sandino's only possible hope of justification therefor lay in the fact that the difficulties to be surmounted in reaching Chipote would make an operation against it impracticable. We later learned that this vain boast lost him many followers after Chipote fell. Nothing of any importance was found on Chipote and after rendering it impracticable for further bandit occupancy by carrying away or destroying everything of value left behind by the bandits, we abandoned it.

Defensive and Offensive Battles on Roads and Trails

From January, 1928, to the present date, all contacts of any importance between the government forces of Nicaragua and the bandits, or between marines and bandits, fall under this heading.

While the general principle that no commander of troops in the field should ever be taken by surprise is our present day doctrine, the difficulties encountered

never free of the ambush danger, as well concealed ambushes were often equally invisible from the air and from the trail.

The doctrine of maintaining contact with the enemy once such contact has been gained amounts only to a play on words and has no practical application in bush warfare. In bandit fighting in the hills or outlying parts, when contact with the enemy has once been gained, our only procedure was to concentrate the maximum fire on the bandit position and inflict the greatest possible loss in the short time at our disposal before they retired through the gullies and underbrush.

Pursuit as we understand the term was unknown. In most cases a really well managed pursuit would have produced little or no results, as after a contact the bandits scattered in all directions to re-assemble at a prearranged place hours later. To attempt a pursuit often would have required the pack train to be left with an insufficient guard and our pack train loads were most precious to the bandits, as well as containing our entire means of subsistence in the field. To send part of our forces through unknown hills and woods in an attempted pursuit would have courted disaster in many ways; men lost; a possible shooting up of our own troops in the confusion, and a costly and profitless delay in reaching a safe camp site for the night.

In Nicaragua our patrols marched through knee deep mud, rocky mountain trails, sweltering in the valleys, almost freezing on the mountain tops, beset by every class of insect placed on earth to torture man, and, when camp was reached, dead tired, the men could not sleep on account of the insect bites received during the day, which with very little encouragement became tropical ulcers. It was truly, "Marching all day and scratching all night." We often heard war time marines yearning for the trenches of France.



Telpaneca.

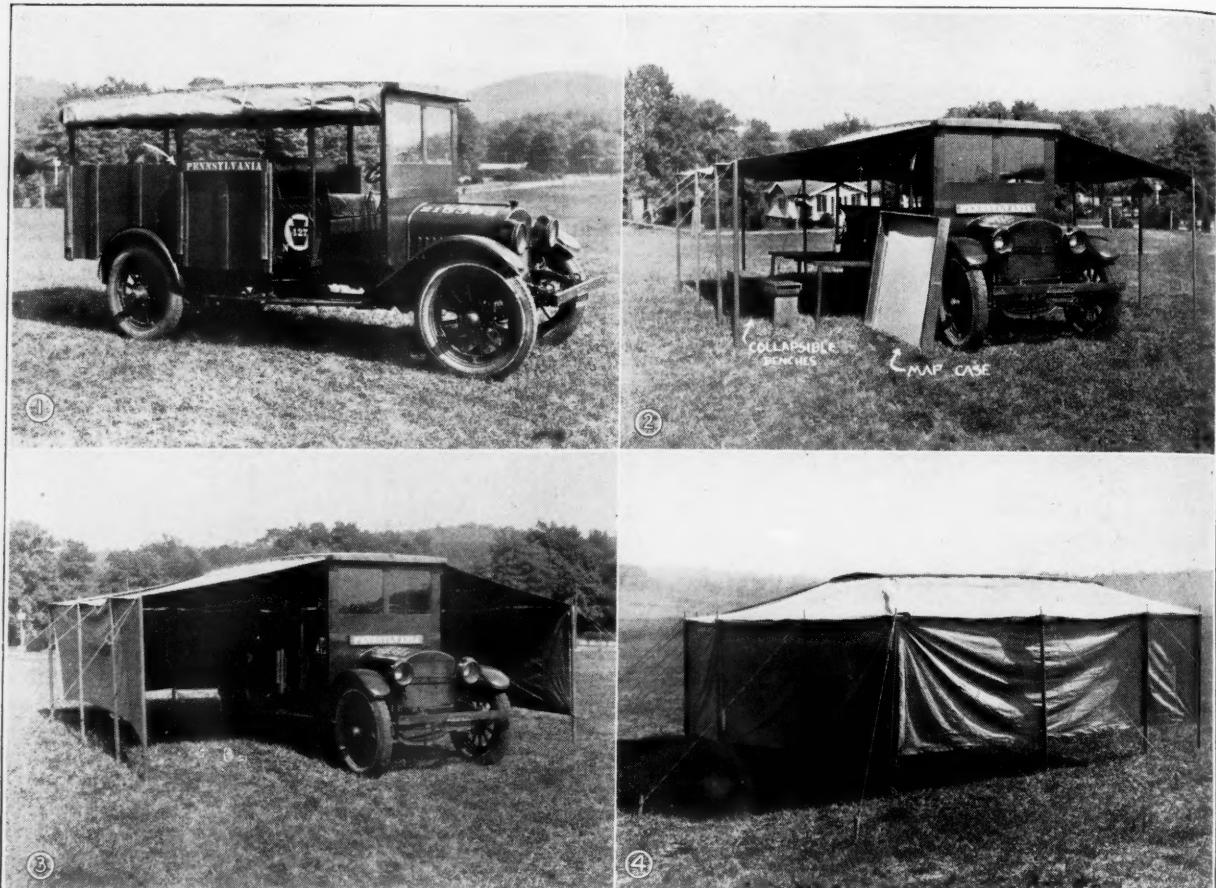
in Nicaraguan trails, the nature of the terrain, climatic conditions, the bandits' superior knowledge of the country, tropical wear and tear on the physical condition of the operating personnel by insects, climate and illness, caused many patrol commanders to look upon this maxim as an ideal never quite attainable. It was seldom that the normal security measures of recognized tactics were possible; even columns operating with a perpetual airplane reconnaissance were

Camp Security for the Night

The orthodox camp security methods were adequate generally as to principle but varied slightly as to application. Sentries on the outskirts of a camp are useless if they walk their post in a military manner as they have been taught to do on regular guard duty. They should remain concealed at places giving them the best view of their sectors. The uneven wooded terrain permits a stealthy enemy to close with a sentry before he can give the alarm, if he walks his post openly. I am a strong believer in camp fires. They should be kept burning brightly all night when the command has bullet proof shelters in which to sleep. In Nicaragua patrols usually reached villages or ranches for the night camp. The camp fires increase the morale and cheer of the men immeasurably and, if properly located, furnish lighted avenues of approach through which an attacking enemy must penetrate and become excellent targets, before they can hope to close with the encamped force. The normal confusion resulting from a night attack, of which the attackers expect to take full advantage, is thus avoided.

The Command Post Truck

By Captain George A. Wiggam, 103d Cavalry, P. N. G. (S-3, 52nd Cavalry Brigade)



TRUCKS of the type shown above were used by the 52d Cavalry Brigade for its C. P. during the III Corps C. P. X. at Camp Meade, Md., in the summer of 1930, and by both the 103d and 104th Cavalry for the regimental C. P.'s during their field training at Mt. Gretna, including use on road marches and maneuvers of several days' duration. It not only solved the problem of transportation of the equipment but it provided a means of setting up a command post promptly at a new location without loss of time and without confusion. It centralized the headquarters and was easy for messengers to find.

When marching on the road the truck is located near the head of the column, generally immediately in rear of the Commander's group, and provides a mobile, readily accessible message center which can be kept open at all times if so desired. The truck is identified by command post signs on the sides, front and rear. The top affords a place for display of identification panels to airplanes without halting the march or having personnel fall out.

The truck used is a light cargo G.M.C. with a stationary top and open sides. Folding tables are at-

tached with hinges along both sides of the truck, extending from the rear of the front seat to the tail gate. Hinged legs fold down against the tables when they are raised. A single large hand-screw (indicated by the arrow in Plate 1 above) holds each table in position against the side of the truck when they are raised for traveling.

A large flat map box or case slightly smaller than the roof of the car fits into brackets suspended from the roof, and in this the staff maps or other perishable papers are carried. Folding benches fit in along the sides of the truck and against the back of the driver's seat. Lighting at night is provided by lifting the head-lights from their brackets and moving them to the sides. A third light with a cord attached is plugged into a receptacle on the dashboard to furnish light at the rear of the truck.

With the Command Post set up, it is customary to place the S-1 and S-4 sections together on one side and the S-2 and S-3 sections on the other side. The Commander and the Executive have their places at the rear.

Orientation of R.O.T.C. Freshmen

By Colonel P. L. Miles, Infantry

AUTHOR'S NOTE: *The following orientation with such modifications as have been necessary to bring it up to date has been given to freshmen at the University of California for four semesters and has been well received. I believe it has helped to raise the morale of the unit to a high plane and I submit it because I believe it may furnish others on this duty an opportunity to obtain information of methods used at this institution which may have some value.*

It is obvious that at the beginning of the basic course it is desirable to assemble the newly enrolled freshmen to tell them something of the course and the purpose of the training. In the absence of this introduction it is possible that a student might complete the entire basic course without a clear understanding of what it is all about. The following introductory talk is given as if addressed to the assembled students.

IN the first place, I want to say that I do not feel called upon to justify military training in colleges and universities generally nor in this institution particularly. That matter has been settled for us; but I know that if you realized that the matter had been settled logically and sensibly, instruction would be easier and your work more pleasant, intelligent and profitable to you.

The Federal Government goes to considerable expense to maintain this training. It surely expects a return for this expenditure in added security to the nation. The State evidently believes that this training has another value in addition to the one just mentioned. The State, of course, cooperates with the Federal Government in the matter of aid to public safety; but, in order to do this, it is not necessary for it to go to the length of requiring all of you to take military instruction. No, the State and university authorities have an independent view of the value of this training quite apart from its value to the country in making you potential officers and noncommissioned officers in time of national emergency. I shall speak of this value to you later.

Let us first take up the Federal Government's point of view.

The R. O. T. C. is part of the nation's plan of preparedness for the possibilities of war. The question immediately comes to the minds of some of you: Why prepare for war? Have we not heard that preparation in itself may lead to war? Some of you may believe that the Kellogg peace pacts and other sincere efforts of a similar nature, designed to aid the maintenance of peace in the world, will serve not only to outlaw war but to eliminate it altogether. If you believe war can be abolished altogether you believe something different from the realization of most of the statesmen of the world and you must remember that the decision for or against war in any particular case is nearly always in the hands of the statesmen. It is only when diplomacy fails that the soldier must step in.

The hope in these peace efforts is to resolve some of the difficulties, to reduce some of the international frictions, to arbitrate whenever we can, to conciliate and therefore to reduce the probabilities of war. You must understand, though, that the undertaking in the Kellogg peace pacts was only to influence the signa-

tory powers to refrain from being the aggressors in war. No nation has agreed nor ever will agree to prostrate itself voluntarily and give up its right to defend itself. And right there is the reason why the practical value of the pacts is so greatly restricted. Opposing nations will never admit being the aggressor in any case. The allies and associated powers believed that the central powers were the aggressors in the World War. The Germans, though forced by the Treaty of Versailles to accept war guilt, have never voluntarily admitted that they were aggressors. On the contrary, many prominent Germans have filled columns of newspapers and periodicals, which some of you may have seen, specifically and emphatically denying any such aggression.

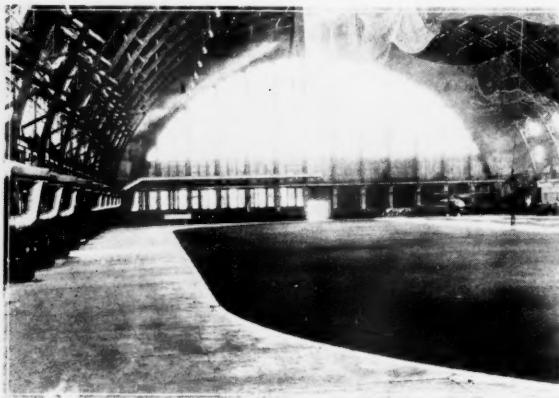
Last year the Manchurian Chinese and Soviet Russia were engaged in open hostilities. They were both sent notes by our Secretary of State calling their attention to the fact that they were signatories of the Kellogg Pacts. They both replied denying responsibility as aggressors. You may remember how curtly Soviet Russia replied to that note telling us in substance to mind our own business, that she was fully aware of her responsibilities under the pact and that in that pact she had surrendered no right to defend herself.

We must not assume that these peoples are sinister or insincere. On the contrary, they nearly always are convinced of the justness of their positions. They have such different backgrounds of belief, such different standards of living and of morals, are likely to have such divergent views of what is right, and are so unconsciously influenced by interest that they can not see any international problem as a disinterested person sees an abstract question. Due to the different point of view the problem is always presented in a different aspect. It has been wisely said that war is not a conflict between right and wrong but between right and right: between right as one people see it against right as their opponent sees it.

For many centuries, men have been seeking ways to eliminate war as a human institution. The most we can hope for is progress. Complete elimination of war can not be expected until human nature undergoes a complete change and human nature has changed but little under the veneer of all the centuries of civiliza-

tion. We have about the same emotions that the caveman had. Of course, we have better control of these emotions than he had, but we are still strongly influenced by love, hate, selfishness, anger, greed, envy, desire, conceit and the whole gamut of emotions.

When we love all men of whatever race or creed as we love ourselves, when we are willing to share everything we have with any pauper without question as to his worthiness, when we are willing to lower our own standards of living to a common level with the rest of the world, when we no longer resent having some one take from us what we believe belongs to us



Interior of Armory, University of Illinois.

and when we are smitten on one cheek and truly turn the other—then the abolition of war will be possible.

War is nearly always caused by the conflict of the economic interests of peoples. The pressure of excessive populations, the emigration from barren or stricken lands, the constant struggle to improve living conditions, the seeking for food and the things necessary for the industrial life of a nation—all of these things have caused many wars in the past.

It is difficult to convince a man who can procure no work in his own country, or who receives there a mere pittance for his toil, of the justice of denying him the chance to work in a more fortunate country where the opportunities for profits from his labor are greater by many fold. On the other hand, while the man in the more fortunate land can well afford to be generous and is usually willing to be so, he is seldom willing to be generous to the extent of sharing his job and his profits with the less fortunate stranger from foreign lands. These fundamental causes still exist and may still lead to war sometimes in spite of every means invented to prevent it.

In this our own beloved country, we have more God-given resources, more wealth, more prosperity, more comforts and luxuries than any people ever had since the world began. We are told by the economists that our prosperity is associated with the questions of high wages that increase the capacity of consumption and elevate the general standard of living, of the consequent increased productivity of the country responding to this power of consumption, and of the

power to market our surplus products abroad. The majority of our people seem to believe that these questions are related to certain political policies, immigration restriction and the alertness of our Government to further the opportunities to market our surplus abroad. These are the things that affect our standards of living but unfortunately they are the very things that cause friction with other peoples.

We should ask ourselves, are we willing to give up any of the things which our fortunate citizenship in this country has given us, are we willing to lower our standard of living? If not, then we must be willing some time or other to fight to maintain it. I believe that our people as a whole are disposed to go to the limit required to maintain it. I hope that day will not come in your life times, but one can not predict when that dire necessity may arise. It is therefore only a matter of common prudence to make suitable preparations against that possibility.

The argument is frequently advanced that measures of preparedness in themselves bring on wars. It is true that a feverish preparation at a time of inflamed public feeling might do so. It is also probably true that competitive arming directed against a particular nation may produce such friction amidst the tinder of international sensibilities that the spark of war is ignited and a devastating conflagration is begun. But a moderate and reasonable preparedness never has done so. Arms and ships and airplanes in themselves do not cause war. Men fought with stones and clubs long before arms were invented.

The R. O. T. C. is a cog in the system of moderate and reasonable preparedness which the representatives of the people of this country in Congress have instituted. So much for the Federal Government's point of view.

Now, what do the R. O. T. C. courses offer you personally? What good do you get from them as an individual? What do you get from the R. O. T. C. training that will benefit you in the profession or civil pursuit you expect to follow after graduating from the University?

First, let me mention the most obvious thing you will gain—discipline. The American people and especially American youth are prone to resent that word. It has been said that the American people are the most undisciplined people on earth. If that be so, it is because they think it inconsistent with the fullest measure of liberty. It is because the real meaning of and need for discipline have not been understood.

A very broad definition that will give you an understanding of what we mean by discipline is this: Discipline is that quality that assures the orderly and dependable accomplishment of a deed according to plan. Modern society is congested and complex. Without discipline, it would be in a state of utter confusion and without personal security. No business can run successfully without discipline and the larger the business, the more important relatively becomes the subject of discipline in the organization.

Military discipline is discipline of the highest type,

because it must be so ingrained that it will cause the habit of obedience in the soldier with such promptness and with such automatic force that the deed desired by the commander will be executed as a matter of course. The aim is to have such a habit of automatic obedience that in cases where the soldier is subjected to great personal danger, he will execute the will of his commander before the natural instincts for safety assert themselves in overpowering fashion.

You young gentlemen come here with high aspirations to leadership in some walk of life or other. Dean Rieber, whose philosophy you will come to respect and whose personality you will come to esteem, has said that no man has a right to aspire to leadership who has not first learned obedience. How does any leader know what he demands of his followers if he has never subjected himself to the discipline inherent in the following of a leader? Discipline is sometimes like a disagreeable but effective medicine; perhaps unpleasant in the taking but certainly beneficial in its effects.

I have dealt at some length on the subject of discipline because a great deal of our training here is disciplinary. Close order drill is almost wholly so. It would take but a short time to get sufficient coherence in ranks to permit the placing of men on the battle field. The purpose in the repetition and the strivings for exactness is disciplinary—to get those automatic reactions, those easy relations between mind and body that cause assembled individuals to act as a team.

Some of you gentlemen will find that you are lacking in good coordination between mind and body. You may not think quickly enough; you may be careless in thought and neglect to fix your attention at the right time on the part of the command that tells you what you are to do; or you may be unable to make your body do at the right time what your brain tells it to do. Close order drill will help you to overcome these deficiencies and will bolster up the mind's control of the actions of the body. Good close order drill has also the purpose of developing pride in one's self and in one's organization. There is a satisfaction in knowing that you are an actor in a good exhibition. A student of this university once told me that he felt submerged and of little consequence in ranks until the thought came to him how unfavorably conspicuous he would become and how unfavorably his action would reflect on his organization if some time at parade before critical spectators he should execute order arms when all the rest of his company had executed right shoulder arms. This thought served to impress upon this student his importance in the machine.

We shall pass over by merely mentioning them, the benefits to be derived from physical training and training in punctuality, cleanliness, neatness, exactness and respect of authority. You probably are not fully aware of the physical benefits you get here in this and the Physical Education Departments in one year.

One instance may serve to emphasize the physical advantages of this training. At the beginning of one semester we had a very hot drill day. In spite of all our precautions we had twelve or fourteen cases of

minor heat prostrations. It should be of interest to you to know that every one of these cases was a freshman. No man who had a year's training was affected.

We believe that the Military Department offers a training in effective organization and in leadership, including the giving of orders and directions, the necessity of follow-up or supervision and the management of men that will be of value to any of you who become leaders in any walk of life. Moreover, we do not believe that the same or similar opportunities for this training are offered by any other department of the University.

It has been found that for military needs, one leader can not effectively deal with more than eight or ten men. When the number available is greater than eight or ten, there must be a subdivision into two or more parts with two or more subleaders in addition to the leader. This increases the overhead and the apparent number of ineffectives. Nevertheless, the added control and supervision by those who are apparently ineffective more than offsets the loss of men in ranks. The same principle should be applied in business organization. Whether it is always applied with intelligence and economy your training here should help you to determine.

You will learn here that orders are delivered through the chain of command. If you are a superior commander, you should not deal directly with a junior commander's unit, ignoring that commander. That is a principle to apply in business. So is the proper relation of the staff to the command something that should be applied in business but is not always understood or done by it.

Some of the students here have observed that what was apparently thought to be a discovery in the economic organization of labor by an author on that subject has been in use a long time in the Army as a principle of organization. I refer to the requirement that specialists learn other jobs besides their own in order that men may be interchanged and the organization not to be disrupted by casualties. This is an age of specialists in professions, business and industry. In many cases, the pendulum has swung to overspecialization. Industry can learn something from the Army in this respect. Think about this if you take the course in labor economics.

A great many men seem to think that leadership is inherent and God-given, that a leader naturally asserts himself and springs into position without effort or preparation like a child born to the purple. It is true that some men have natural ability as leaders, but it is just as true that leadership can be acquired by an understanding and application of its principles and intelligent training in them.

If you expect to have a thing done as you desire it done, you will learn here how carefully and exactly you must give your directions. You will learn how much explanation of a new matter you can give at one time with a reasonable expectation that it will be absorbed. You will learn that, other things being equal, the length of such explanations must be shorter

for a group than for an individual and shorter for a large group than for a small one. You will learn the method of being forceful without being offensive. You will learn the necessity of follow-up or supervision—that it is not sufficient merely to give an order or direction but that you must follow it up yourself or have an organization to follow it up for you to see that your direction is properly understood and executed as you intended.

Supervision of execution develops your power of observation. You learn to observe a whole group and pick out errors of execution. You learn something about the handling of men and you begin that as soon as you are made a corporal or a lance corporal and get a group to be responsible for.

Your actions as commanders of even the smallest

groups must be such as to command respect. The best way to do that is to impress on your group at the outset that you know your "stuff" accurately and fully. There is a way of requiring attention to business without being offensive. There is a way of getting your command to do a thing not only willingly but enthusiastically. There is an excellent opportunity here to learn through practice how to lead other men—to make them do the thing you want them to do, cheerfully, with everything in them. If you acquire that ability here and take it away with you when you leave the University on graduation you will be leaders.

This is by no means a full discussion of the offerings of the Military Department, but it will serve to orient you and perhaps clear up some misconceptions.

Du Pont Smokeless Powder Experimental Laboratory

THE experimental laboratory of the Smokeless Powder Department of the du Pont Company, which has heretofore been known as the Brandywine Laboratory and which was located at Henry Clay, near Wilmington, Delaware, has been moved to Carney's Point, New Jersey, the location of the du Pont smokeless powder plant.

New buildings have been erected for the Smokeless Powder Laboratory at Carney's Point, including a new ballistic building, a chemical laboratory and the necessary units for the semi-works plant. The new laboratory will be known as "Burnside Laboratory" in honor of Mr. Charles F. Burnside, deceased, who was one of the pioneer smokeless powder makers of America.

Although only experimental samples of powder have actually been made in the Brandywine mills for a number of years, the testing of powders has been continued on the site where E. I. du Pont de Nemours established the original du Pont mills in 1802. It is explained that the change has been made in the interest of convenience and efficiency, as all du Pont smokeless powders are produced in the Carney's Point plant which is said to be the largest manufactory of the smokeless type of powders for sporting uses and for military purposes in the western hemisphere.

In striking contrast to the simple single piece of equipment used for testing black gunpowder more than a century ago are the highly scientific instruments with which the new du Pont laboratories are equipped. For many years after the making of explosives in the little water mills on the Brandywine began, the sole means of testing the "strength" of gunpowder was the *éprouvette*, a small mortar, into which a measured charge was loaded together with a solid iron cannon

ball. Firing was done by means of a red hot rod placed on the touch hole. The index to the strength of the powder was the distance the ball was shot by the charge.

Some measure of the advance in the manufacture of smokeless powder can be had when this old method of testing is compared with the precise measurements made today on apparatus such as is installed in the present du Pont laboratories. There are super accurate chronographs for measuring velocities, pressure gauges which measure the pressure with utmost exactness, the gun for measuring recoils, the oscillograph for making time-pressure curves and many other instruments used as gauges of the various qualities which a good powder must possess.

The production of propellant powders is an exact science which calls for the most minute care because of the qualities which must be developed in the product. The du Pont laboratory has developed a system of accurate chemical control, the result of the many years' experience of the Company, which aims to make a product whose stability, propellant and keeping qualities will meet the demands. Modern smokeless powder is an entirely different product from the old black powder which was a physical mixture. Smokeless powders of today are cellulose products and are made to meet exacting specifications. The system of chemical control and checking which has been developed in the du Pont laboratories aims to insure the greatest uniformity in meeting the various sporting and military requirements.

In addition and all important is the fact that after the powder has been manufactured and tested ballistically, samples are stored in specially constructed, high temperature surveillance magazines where the keeping qualities of the product can be reliably predicted in a comparatively short space of time.

Chasing the "Transvaal Wolf"

By Lieut. Col. William W. Edwards, Cavalry(DOL), Asst. Chief of Staff, 103rd Division

(Continued from July-August Issue)

The British horse artillery which unlimbered instantly upon the ridges lost no time in finding a target. The Boer transport halted dead in its tracks. The wagons were outspanned where they stood and the teams hurried into the protecting river bed.

General French, meantime, had pushed forward two squadrons of the 12th Lancers, with a battery of horse artillery to cover his left flank in front of Cronje and seize a crossing east of the convoy and west of the main drift so as to effectually block the Boers under any circumstances from crossing the river. Evidently Cronje clearly recognized the peril of his position for he lost no time in making vigorous efforts to ascertain the strength of the mysterious force which dared attempt to stop him. Four Boer guns were brought up to directly oppose those of the British to which they made vigorous reply, but after twenty minutes firing, were outmatched and either silenced or withdrawn. On the right rear of the British guns, a strong body of Boers attempted to seize a lower spur of high ground. A squadron of the 10th Hussars, later reinforced by a squadron of Household Cavalry and a battery of horse artillery, raced the Boers in the open and reached the position first, holding this important post throughout the day. As the afternoon waned the Boer fire having slackened, the squadron of Hussars was pushed forward to ascertain if the Boers were holding the river bank in force. When the squadron moved forward, well opened out, their right flank extending close to the river, they were met by a heavy unmistakable rifle fire from a low embankment, paralleling the river at about six hundred yards and the fire compelled them to fall back. Though with considerable loss in men and horses, their mission was very definitely accomplished. The river bank was held. Of this there could be no doubt. And in addition, it was probably being intrenched!

Simultaneously with this movement on the part of the Hussars, an independent Boer force, coming up from the south, presumably a reinforcement from Stormberg or Colesberg, was seen heading along the ridge, extending northwest of Koodoosrand Drift. This force opened fire from Koodoosrand itself and shells began to fall uncomfortably near the high ground around the Kameelfontein Farm which General French had selected as his headquarters. It was the obvious intention of the Boers to work about the semi-circle of hills and surround that portion of the British forces on the west which was holding Cronje's front. Again the Boers showed themselves better defensive soldiers than offensive. In this particular instance,

their efforts as usual were not pushed with the vigor which the occasion demanded. A well handled squadron of the 12th Lancers, which had been holding a position throughout the day at Kameelfontein Farm, reinforced by a section of guns, proved sufficient to keep them effectually in check and frustrate their efforts.

In the evening the fire slackened on both sides and in the welcome dusk, a cloud of dust to the west of Paardeberg brought quick hopes at French's Headquarters that the mounted British infantry was approaching, but a heliograph signal failed to establish communication and after dark General French ordered a salvo of guns as a means of indicating to Kitchener and Lord Roberts, if they were within sound, that he had headed off Cronje. That night intense anxiety prevailed in the British cavalry camps.

All fully realized that the insignificant strength of the cavalry advance force must by this time be pretty well known to the Boers, by whom a bold attack would in all probability result in sweeping it away. It seemed indeed a foregone conclusion that if the British infantry did not come up by the following morning, the resolute Cronje, aided by the Boer forces from Bloemfontein, would easily fight his way through.

The British squadrons made a cheerless bivouac in the positions they had taken and held. In view of the uncertainties of the immediate future, their regular rations had been carefully saved against a probable emergency and the men and horses were supplied from neighboring farms which for the last few days had fortunately appeared frequently enough along the way to supply their needs.

Before daybreak the next morning General French, with his staff rode from Kameelfontein Farm to the extreme right of his command. When the sun rose, it disclosed no Boers upon the western hills toward Paardeberg. This was found to be the only change in their position of the day before. Just where it had first precipitately halted, the Boer wagon train lay in the broadening early light still sullen and lifeless. Along the bed of the Modder, some slight movements could be seen. According to the combined story of Boer deserters who came from time to time like rats from a hole, everything within the Boer laagers was in great confusion. As soon as there was sufficient light, efforts were continued to get into heliographic communication with Kitchener's infantry advancing from the west. After repeated attempts, the cavalry signals were acknowledged and French's thrilling story cheered and hastened the lagging steps of Kitchener's infantry.

If Cronje was to get across the Modder now he must crawl out of his trench and fight under the conditions imposed by Lord Roberts, otherwise he would have to remain where he was until the forces of "Little Bobs" closed about him. There was now little doubt as to who was master of the situation.

Cronje had made his way down to the river and occupied a long stretch of it between the Drifts of Paardeberg and Wolveskraal. "Little Bobs" himself had arrived that day at Paardeberg having come from Jacobsdal and the "outside Boers" displaying greater activity below the south bank of the Modder to the east of Koodoosrand Drift, General French, after a consultation with his Chief, obtained permission for his cavalry division to be transferred from Kameelfontein to Koodoosrand Drift, their present position to be taken by the infantry who, on account of their numerical superiority, could extend their lines. A flash light message was also sent to Kimberley for the remaining portion of the cavalry division to join with the utmost rapidity.

Accordingly, General French commenced a series of operations on what might be termed the outer circle of the net which had been drawn around Cronje, the object of the cavalry being from this time forward to nip in the bud all enemy plans for reinforcements coming from the south and west and so leave the main body of infantry free to devote itself to what had now become the main issue of pressing Cronje to surrender.

This was the situation at the end of an intense breath-taking week, whose beginning saw the taking of Kimberley. The old Wolf was now fairly surrounded. On the west the Highland Brigade of Kitchener's army, which had met the brunt of the repulse at Magersfontein, was south of the river with another infantry brigade on the north. On the east General Kelly-Kenny's division was on the south bank while French with his cavalry and the mounted infantry which had meantime come up, were to the north of it. Yet the Boer position was a very formidable one. Not only were the banks of the river fringed with Boer riflemen under the best cover imaginable, but from these banks, as if nature herself were in league with the Boer cause, extended on each side a number of "dongas" or deep ravines which made formidable natural trenches. The only possible attack, from either side, must be made across a level plain, fifteen hundred yards wide.

Such an assault was actually made—by a grave error of judgment—the following Sunday, February 18, 1900. It developed inevitably a resistless sheet of bullets from the desperate and invisible Boers, whose lines of unerring marksmen were sheltered by these dark, mysterious dongas as well as the river bank itself.

With the deadly experience of Magersfontein in retrospect, it was a foregone conclusion that it would be unsuccessful. Although several impossible British attacks were made, the Boer line was proved unshakable. Even the British artillery which shelled the river bed made practically no impression upon the scattered

and hidden Boer riflemen. The only outward effect which these attacks showed was in the contraction of the Boer position from about three miles to two. Death still lurked among the willows which hid the brown, steep banks of the Modder.

Meantime far distant Boer laagers were hurrying to Cronje's rescue. The Boer relieving force took up a position south of the river stretching from Paardeberg, in a southwesterly direction; a strong defensive position it was, with the evident intention of covering Cronje's retreat. General French was first concerned to firmly secure the two drifts—Koodoosrand and Makauw,—the latter five miles further up stream. In order to do this, it was necessary to occupy the line of kopjes one mile south, which ran parallel to the river. General Gordon with a battery of artillery, the 16th Lancers, and one hundred and fifty men of Roberts' Horse, was selected for this mission. The Lancers were detailed to seize Makauws Drift and Roberts' Horse, Koodoosrand. Both were successfully accomplished.

The possession of Makauws Drift by the British turned the enemy's flank under cover of the British artillery which laid a heavy bombardment on the hills to the south. Roberts' Horse was enabled to move out from Koodoosrand Drift and step into the positions the Boers had left along the coveted kopjes, which thenceforth formed the British outpost line, the remainder of Roberts' brigade bivouacking on the right bank of the river itself.

By these operations General French placed himself in a position to cooperate in an attack which was planned on an important isolated eminence held by the Boers and known as Kitchener's Hill, for the reason that it was the position first occupied by Kitchener's Horse when his main army reached Paardeberg. The hill rose some distance from the Modder, southeast of Paardeberg Drift, and was an important strategical point in that it commanded not only the river bank but a wide expanse of open veldt. Its importance had been gauged by Cronje as well as those who had so loyally flocked to his rescue. The "outside" Boers now held this vantage point in considerable numbers.

Should Cronje break through the British lines, as his comrades in arms had every confidence that he would, his retreat southward would be covered and practically assured so long as the Boers held Kitchener's Hill. The keen military eye of Lord Roberts, seeing that the enemy must be dislodged, sent two battalions of infantry, reinforced by artillery, to operate from the direction of Paardeberg to the south of the hill, while Broadwood's brigade of French's cavalry was ordered at the same time to turn the hill from the west and south, joining hands with a cavalry force under General French himself, which cooperating from Koodoosrand Drift, was to clear the intervening kopjes on its way. A battery, with the Lancers, one squadron of Kitchener's Horse and a detachment of Roberts Horse, was adjudged sufficient to leave behind as a protection to the Drifts. It may be well to mention in this place the skill and courage displayed by cavalry patrol leaders in the matter of reconnaissance which

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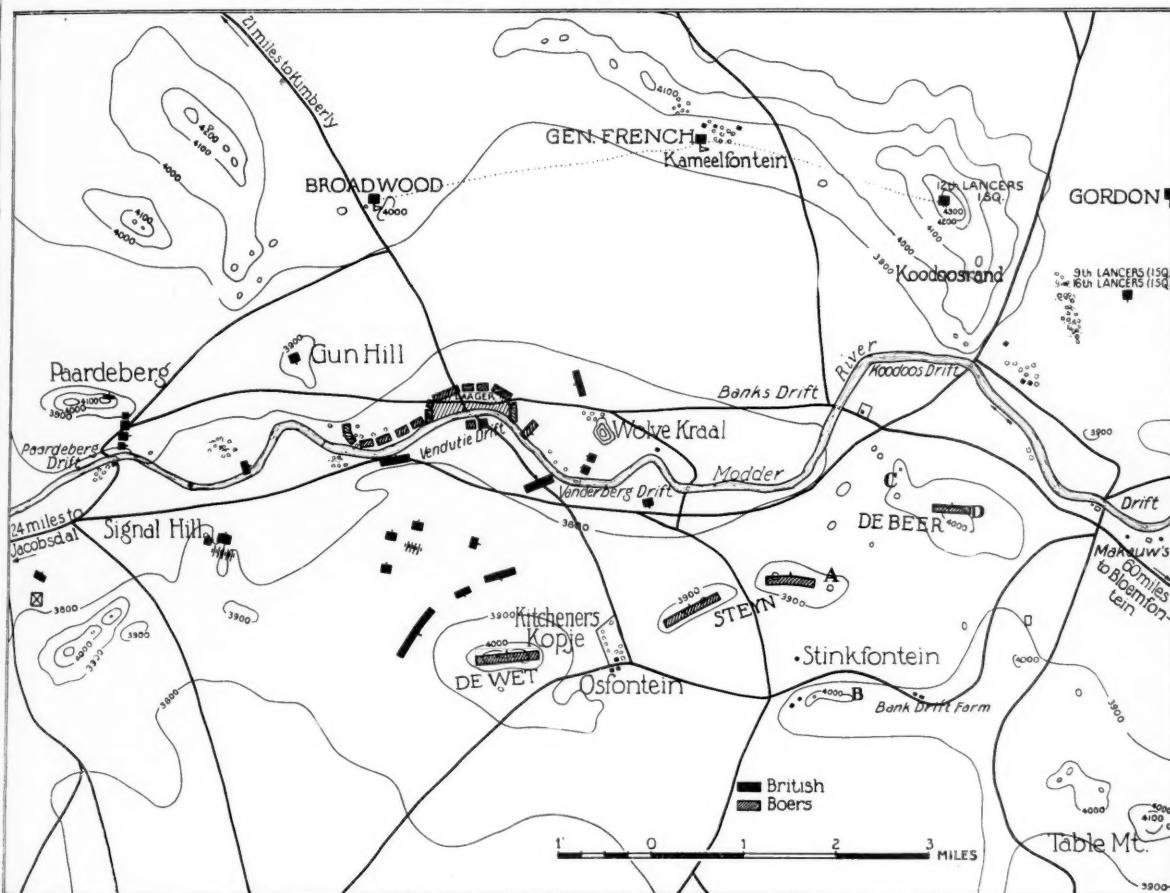
was a particular feature of the work of French's cavalry in the Boer War. Over and over again the only means of finding out if a kopje was occupied by the enemy was for the British scouts to ride on until a burst of flame from the crest was incontrovertible evidence of the fact. It was a daily occurrence for a subaltern to go and draw Boer fire, knowing very well that this would not be until he got within the deadly range of four hundred or five hundred yards of an enemy, lying so well concealed that field glasses could not detect even so much as the muzzles of their rifles.

The terrain conditions generally made it inevitable that British scouts were forced to advance over an open plain where for miles they were visible to the keen eyes of the Boers. A grave deterrent to the confidence of the British cavalry scouts was the condition of the horses, which rendered cavalry patrols very liable to be overtaken if discovered. The method which was found to answer better than any other was that of dividing into small groups of four men each, supports of from eight to ten men riding about three hundred yards in rear, the groups riding at intervals of three hundred yards, a reserve of forty to fifty men being in rear of the center.

Setting out at daybreak on February 21st, so efficient

was the work of the scouts that French's guns, when within 2500 yards of the most easterly Boer hill, were enabled to open fire upon it with confidence and effect, whereupon the Boers fell back in haste to their next position, a ridge lying westward where they were protected by a natural fortification of boulders, against which the British guns were unable to make any impression whatsoever. General French accordingly moved off to the flank and joined Broadwood's Brigade, which having marched from Paardeberg, was with General Kelly-Kenny's infantry actually engaged at the time in bombarding Kitchener's Hill itself.

As General French was resting his tired horses, about eight hundred Boers came galloping from Kitchener's Hill into the open. Evidently thinking that the reduced numbers of the British squadrons in plain view would be easy victims, they dismounted at eight hundred yards from General French and opened fire. But they had not seen and therefore had not counted upon the British guns, which lay concealed in the long grass behind and which soon unlimbered and opened fire. The dismounted British troopers meantime added to the discomfiture of their surprised foe by firing hot volleys. The Boers, suddenly checked in their confident advance, wheeled off and retired in the direction of an easterly hill they had abandoned earlier in the day.



PAARDEBERG.
Situation Early Part of the Night of 18th-19th February, 1900.

Finding even this position untenable they turned and fled across the plain towards Makauws Drift, under the bullets of the outpost held by Roberts' Horse. Their final disorganization was accomplished by the opportune fire of two British guns holding Makauws Drift from the north side. The British plan of Boer dislodgement by flanking movements of strong columns of cavalry with heavy guns, while an attack was delivered in the center by a strong force of infantry, resulted in gaining one Boer position after another for none had the wish to share the unenviable position of their favorite but unfortunate commander whom they had come to relieve.

By the next morning (February 22nd) the Boers had evacuated all their positions south of the river from Kitchener's Hill to Poplar Grove, their General Botha barely being able to save himself by racing off on a pony. The line of cavalry now extended from the river to the mounted infantry pickets at Kameelfontein. Two squadrons with guns formed a reserve at the neck, north of Koodoosrand Ridge and two squadrons of the Sixteenth Lancers reinforced the cordon round Cronje's laager from Lincoln's Post to Kitchener's Hill.

At this time, another one of French's Brigades—General Porter's—arrived from Kimberley at Koodoosrand Drift, somewhat later than expected, owing to the miscarriage of orders and delay of supplies. For a week there was no sign of their transport train. The effect of short rations was intensified by exposure during many nights of exceptional inclemency during which the men were devoid of shelter and had no protection other than the clothes they wore. Yet fighting almost continuously during this period, they were rewarded for their efforts by at last seeing the "outside Boers" in their front in full retreat from the neighboring kopjes. Their success was however tintured with regret inasmuch as it was out of the question with their jaded, worn, underfed and overburdened troop horses to pursue the Boers mounted upon their seasoned, hardy and lightly equipped ponies.

The place of cavalry in the pursuit had to be taken by artillery which never failed to shell the Boer horsemen, even though with indifferent results against such a fleeting target.

The total strength of General French's cavalry division at this time, reduced by the ardors of the South African veldt, was 4530 of all ranks, 4221 horses, 42 guns and six Maxims. Cronje's predicament in the meantime did not grow better. A careful inspection by the field glasses of the "outside Boers" showed Cronje's laager to be completely surrounded by the enemy. Hemmed in on all sides, his ease and that of his loyal burghers, a mere handful compared with the encircling multitude, had grown rapidly into a desperate one. For such a soldier as "Little Bobs" was not slow in pressing his advantage. He soon brought up a whole infantry division while the British artillery was reinforced by three Naval 4.7 guns and two Naval twelve pounders. In other words, thirty-five thousand men and sixty guns were scattered around Cronje's little Boer army on the Modder.

The frightful roar of big guns, the indescribable thunder of bombardment was always in their ears. It was only the supreme resolution of the Boer farmers and the indomitable example of their leader that enabled them to hold out through those interminable days. There was, of course, the strong hopes of relief which, welling continually, seemed not altogether in vain. The popularity of Cronje accounted for the many and determined efforts which had been made in his direction. They were based also upon the expectancy that ultimately he would fight his way out. Thwarted by the British cavalry, which stood around like terriers at a rat hole, the efforts of these "outside Boers" were destined to be of no avail.

Finally *their* hopes likewise perished. A Boer dispatch rider from the "outside" wormed his way miraculously through the British lines to Cronje, with the urgent appeal that he push through the British lines to an appointed rendezvous, where he would fall under the protection of the relieving forces. At the place of rendezvous—well outside the lines held by the British cavalry—the relieving forces waited for the helpless Cronje in vain. Through the silence of night, when his attempt was to have been made, the daring Boer messenger returned with an echo from the beleaguered Boer trenches to the effect that, as his horses were all killed, Cronje considered the attempt at escape foolhardy and declined to make it. Henceforward his days were numbered,—days in which the hours were continually punctuated by the pitiless guns which crashed shell and shrapnel into the river bed where the miserable Boers were huddled amidst their dead horses.

Lord Roberts' dispositions for envelopment were simple and efficacious. One brigade of infantry was placed astride the river to the west, with orders to push gradually up as occasion served, using trenches as their means of approach. Another infantry brigade occupied the same relative position on the east. Two other divisions remained in readiness. The two infantry brigades at either end of the Boer lines at length got within striking distance. The front trenches of the nearest brigade were only seven hundred yards distant from those of the Boers.

Before moonrise, in the darkness of the early morning, the Canadians, being in the lead, advanced, the front rank holding their rifles in their left hands and each extended right hand grasping the sleeve of the man next to it. The rear rank had their rifles slung and carried spades. The two infantry companies nearest the river were followed by a company of Royal Engineers, carrying bags of earth. The whole line stole through the pitchy darkness with the realization that any minute a blaze of fire such as flamed before the Highlanders at Magersfontein, might blow them to eternity. One hundred! two, three, four, five hundred paces! They could sense the Boer trenches. Still onward they stole, step by step. Their quarry must be within a stone's throw of them. Involuntarily, their hopes began to rise. Then as suddenly, they were cut short by an ominous resonant, rattling sound. Without

(Continued on Page 64)

Community Interest in National Guard

By Colonel William H. Waldron, Infantry

"I DO not seem to be able to get the people of this community interested in my company," complained Captain B. Company B was on the skids and sliding. The last field training inspection report rendered on the company was not good and the recent annual armory inspection report did not nearly come up to the Colonel's expectations. The Captain and the Colonel of his regiment were discussing ways and means for the improvement of the outfit which was stationed in a thriving little city of about 12,000 souls.

"Just what do you estimate to be the trouble?" inquired the colonel. "Let's lay all the cards on the table and play them face up—open and above board," he continued.

"No cooperation; no civic pride in this community. People of this town don't care anything about the National Guard," replied Captain B. "We can't get the right kind of young men in the company. Employers don't want National Guardsmen in their organization," he explained.

"All right," replied the colonel. "Now let's analyze the situation and try to arrive at some conclusions that may be of some value to us. You have a good armory here, and I must say it's kept in pretty good shape"—

"One of the best in the State," broke in Captain B. "We do keep it in good shape. You know, I'm a stickler for limiting the use of the armory to the purpose for which it is intended—military training. I don't believe it should be loaned out or rented for all kinds of affairs—dances, carnivals, automobile shows and such things. I turn them down all the time. I figure this armory was built for the training of Company B and is not to be used for a lot of outside things."

Figuratively speaking, the Colonel took a blue chip from the Captain's stack and deposited it on his own. He labeled it "non-cooperator." He continued his questioning.

"Do many of the townspeople turn out for your armory drills, and other company activities?"

"They do not. I have to keep them out of the armory on drill nights. I found that having a lot of people hanging around here on drill nights interfered with my training and I had to put a stop to it."

Another blue chip was added to the Colonel's stack. He earmarked it "exclusiveness."

"I happen to know, Captain, that you are in the insurance business," said the Colonel. "Do you hold a membership in the Chamber of Commerce?" he inquired.

"Chamber of Commerce in this town is a frost, it is absolutely no good," asserted Captain B. "They do not do anything worth while. Besides, sir, I do not see what that has to do with Company B." It was a touchy subject with the Captain. He had had a row

in the Chamber of Commerce over the use of the Armory for a big civic affair and was in bad odor in that body. A third blue chip from the Captain's pile graced the Colonel's growing stack. It was named "civic interest." He went on leading trumps.

"You have a Rotary Club in town?" asked the Colonel affirmatively.

"Yes, sir, and they claim it is a pretty progressive outfit," admitted the Captain.

"Have you ever been to any of their noonday luncheons?"

"No, sir. As I understand it, the luncheons are confined to members of the club."

"Did you ever consider the idea of trying to get a membership in the Rotary Club?"

"No, sir. Another insurance firm fills the insurance classification there," was the alibi.

"Did it ever occur to you that there is a military classification provided for in the Rotary Club? I think it comes under the heading of National Defense, Land."

"Never heard of that before," declared the Captain.

"Well, that is a fact. As Captain of Company B, you are the head of the element of National Defense in this town, and as such you would be perfectly eligible for membership under the National Defense classification. Better look into it," enjoined the Colonel.

"I will," agreed the Captain reluctantly. "But that is a pretty close corporation and hard to break into. However, I'll do what I can about it."

"You know, your annual dues would be a perfectly legitimate expenditure from your company fund," vouched the Colonel. "It would certainly be classed as for the benefit of the company."

This statement seemed to ease the mind of Captain B. somewhat. But the attitude of the Captain gave the Colonel another chip—a red one this time and he dubbed it "tight-wad" in his own mind. He may have well added the same to his Chamber of Commerce chip.

"You say employers do not want National Guardsmen in their organization. Do you know this to be a fact, or do you just surmise it?" asked the Colonel.

"All I know is that some of my best noncommissioned officers have declined to reenlist when their enlistment expired, and they gave me that as their reason," contended Captain B.

"How do employers get around the law if they discharge a man because of his absence on account of attending a field training period with the National Guard?"

"Perfectly easy to do it," replied the Captain. "No employer will say to a man, 'Jones, if you go to the training camp I cannot hold your place open for you.' That would be a poor way to put it up to Jones.

What actually happens is this. Several weeks after Jones comes back from camp and returns to work, Mr. Employer tells him that work is slack and they have to reduce the force, and that he is compelled to lay him off. He will let him know when to return to work. Jones is let out. The call to return never comes to him. Some other fellow eventually gets the job. But there has been no violation of the law."

"Have you ever gone to one of these employers and put the proposition squarely up to him?" inquired the Colonel.

"I would get nowhere with such stuff. He would laugh me out of his office. These people have no interest in the National Guard or in the National Defense. As far as Company B is concerned, the outfit does not fit into their scheme of things at all—at all. No use for me to waste my time on that line, Colonel. All I could do wouldn't amount to a hill of beans."

The Colonel increased his stack with another blue chip from the Captain's pile. He labeled it "employers," for the want of a better word.

"How many times has your company turned out in the past year? Have you all been in any parades or other community affairs?" questioned the Colonel, in quick succession.

The Captain thought it over for a moment. "As far as I can remember, not once," he answered. "There hasn't been a parade in town, that I know of, for more than a year. Last Armistice Day the Legion had charge of the ceremonies and they did not call on Company B to participate. I did not feel like butting in, because I got out of the Legion two years ago on account of the things they were doing in the Legion Post. I did not like the way they were running things."

Another blue chip to the Colonel's stack. It was dubbed "Legion." It raised the total to six. Here the Colonel stopped his questions. He lighted his pipe before proceeding.

"Captain, we have played the cards. I have lead trumps all the way through. I have acquired six of your chips and added them to my stack. Each one of them represents a thing that is the matter with Company B. I want you to listen to what I have to say about them.

"First, let's consider the matter of the use of the armory. This is a public building—bought and paid for by the people, the tax-payers of the state. I agree with you that it is primarily intended to be used for the military training of Company B and should not ordinarily be diverted from that purpose. But it is a fact that it is not used for military training every night in the week and in my opinion it should be made available to the community when it is available. Let me illustrate.

"Some civic organization needs the armory for a community affair. A committee of citizens come to you and ask you to let them have it on a specified date, which they have so arranged that it does not in the least interfere with your armory drill. In reply to their perfectly reasonable request you say No; maybe in no uncertain terms; maybe you try to give your reasons. They do not get by with the committee. These

fellows are influential citizens, else they would not be on such a committee. By your action you have created a group of knockers against Company B. Had you granted their request you would have rendered a service to the community and at the same time made a group of boosters for the outfit. I am sure you see the point I am trying to get over to you," said the Colonel.

"Yes, sir. I see the point. Do you mean to say that I should let these people have the use of the armory without their paying for it?" inquired Captain B.

"That all depends upon what it is to be used for. If it is for a charitable purpose or something of that kind, I would say there should be no rental consideration. If it were a business proposition where some civic organization anticipates deriving a money profit from the use of the building, it would be perfectly all right to make a charge for it. Such organizations are usually ready and willing to pay a reasonable rental. Each case must be considered and decided on its merits.

"Some units have well organized activities in which extensive use is made of their armory and from which they derive money for their organization fund. In those states where boxing is legalized, armories are capable of being made handsome revenue producers under proper management. I have known of instances where one-company armories have made good profits by conducting roller skating rinks in them. There are individuals who will take over an armory on certain specified nights each week and run it as a skating rink, giving the company a percentage of the gross receipts. They supply the skates and all equipment for the conduct of the business."

"Well, I must admit that I have never looked upon the matter in exactly the way you have put it up to me. Your arguments are convincing. Company B surely needs some boosters and maybe that's one of the ways to get them. It also needs some funds with which to carry on."

"From now on I will depend upon you to consider the use of the armory in the light of what I have said," enjoined the Colonel.

"Very well, sir," said the Captain.

"Now, let's consider the second chip. You say that you do not encourage the townspeople to come to the armory on drill nights. In my opinion you are making a grave error. How do you expect people to take an interest in something of which they know nothing? It's not human nature that they should do so.

"I would turn my policy around in this respect, just 180 degrees. I would encourage people to come to the armory on drill nights and let them see what the men are doing. When practicable I would put on a demonstration of the company activities, have open house, and invite the people to attend. On such an occasion I would have something worth while to show them. Arrange for guides to show them around and explain things to them. By doing these things you will raise the morale of Company B and you will make a lot of friends for the outfit. This open house proposition is no fanciful dream. It is a reality and those organizations which have tried it out have found it all to the good. Besides creating community interest it is

capable of being developed into a big publicity feature for the company which only adds to community interest.

"Again I say, I will depend upon you to proceed along the lines I have been talking about. I am sure you will find it to your advantage to do so."

"Yes, sir," was all that the Captain could say.

"We will now consider the third chip. I noted with interest what you said regarding your position in the Chamber of Commerce and their attitude towards Company B. I am familiar with all of this and the problem is capable of solution. In fact I have started the solution already. I have paved the way for you through my friends in the Chamber and they are ready to let bygones be bygones.

"In your Chamber of Commerce you will find the leaders of business and civic affairs of your city. They are men of influence and prestige in the community. As an organization they can put over anything they set out to do.

"I also happen to know that there is no military committee in the organization of the Chamber of Commerce. The consequence is that there is no organized body whose business it is to consider things military in this city. There should be such a committee, and you being the senior officer of the National Guard, should be chairman of it. I have also talked this matter over with the president of the Chamber and when you have demonstrated to them that you are ready to play the game, they are ready to meet you more than half way. In this connection I may say that your membership dues in the Chamber would be a legitimate charge against your company fund."

"But, Colonel, you are piling up more charges against the company fund than it can stand," said the Captain.

"I was waiting for just that statement. My answer is this. When you get to doing the things I am telling you about, the community will support your company. They will see to it that you have all the money in your company fund that you require.

"All that I have said about the Chamber of Commerce and its relations with you and your company, I now repeat and emphasize, with respect to the Rotary Club. Again I have paved the way for your application to fill the vacaney now existing in the Rotary classification "National Defense, Land," and you will be elected to it in due course. You will have to submit your application and have it acted on by the membership committee of the Club.

"You will find that your membership in these bodies will give you a higher standing and increase your prestige in the community. Incidentally, you will find that it will do no harm to your business in civil life.

"Now, take these third and fourth chips and add them to your stack. Check and double-check them."

The Captain saw the points the Colonel was making. His morale was going up every minute. In his heart he was clamoring for the solution to his other problems.

"Now, for the fifth chip. I want you to win that back, too. These employers of men are hard headed

business men, intent upon making profits for themselves, paying their stock holders regular dividends and keeping their establishments out of the red. They have to do these things to get away with their game. Unless they can see some advantage in having their men in Company B, they cannot be expected to give a whole-souled endorsement to the idea of their going off to a training camp every summer. The best you can hope for is absence of antagonism. But you show these fellows where Company B fits into their own scheme of things and how the company may render them a service, and the way is paved for their support to the limit.

"You say some of your noncommissioned officers failed to reenlist because their employers do not want National Guardsmen in their organization. Where were these men employed?" asked the Colonel.

"One of them is with the street railway company, and another is with a manufacturing concern," replied the Captain.

"All right, suppose you go to the corporations with a proposition of rendering them a service in case of fire, flood, storm, or other disaster, show them that Company B is the only organized and equipped body of men in town that is capable of being called into service in an emergency and that can be depended upon to step in and take charge of affairs when the local authorities have exhausted their resources and have their backs against the wall. Tell them that Company B stands ready and willing to do this community service in case of emergency and show them your plans for the mobilization of the company on short notice. In connection with all of this, you propose that you make a military survey of their plants and work out these relief plans to meet any emergency that may arise. Such a survey will include the location of sensitive and vital points in the establishments and your plans for the protecting them with guards and relief parties. You will find these people interested because you are proposing to render them a service.

"At this time you do not have to bring up the employee question at all. They will eventually bring it up themselves and coming from them is better than coming from you. The chances are that they will be encouraging their men to take on in Company B."

"That's all fair enough for the fellow who has nothing to do but command a company in the National Guard. You know I have a living to make, too," argued the Captain.

"Again I was anticipating that remark. You are in the insurance business?" affirmed the Colonel.

"Yes, sir," answered Captain B.

"Can't you see, man, that the contacts you make in connection with the service of Company B will stand you in good stead in the insurance business? Can you get any better approach to a man than the offer of a service to him? Your business depends absolutely upon favorable contacts. I'm pointing out to you the best way in the world to get them. In the game I'm talking about you never know when you may be rustling up a high commission policy. There are dozens of industrial concerns here any one of which may re-

quire the services of Company B any minute. I do not think it is necessary for me to say more on this subject, is it?"

"No, sir," replied the Captain. "I get your points."

"Now, for the sixth chip. A National Guard company needs opportunity to display its goods. If these opportunities do not exist they must be created. An up and going Legion post has occasion to turn out several times each year. They are the logical organization to have charge of the local patriotic affairs. In order for Company B to get in on these, the company must have a standing with the Legion. This all means that you as the Captain of Company B must take a leading part in the conduct of Legion affairs. You can render indispensable service to the Legion, and by working it in the proper way you can be one of the leaders of their activities.

"My advice to you is to brush aside any personal

feelings you may have against the Legion. Get into the organization with both feet and play the Legion game big. You need them for Company B, and they need Company B at every turn of the road. I am sure you see my contentions and how you can work out the solution of the problem to the benefit of the National Guard."

"Yes, sir," was about all the Captain could say.

"I expect to see your activities along the lines I have indicated reflected in the future reports on your company. I realize it is going to take you a while to get these things operating but when you do I am sure you will find them all to the good," said the Colonel.

Captain B thanked the Colonel for his visit. He expressed his sincere appreciation for what he had done for him. He assured him that the day marked a new jump off line for the company and for himself as well. So it proved.

International Horse Show at Pardubice, Checo-Slovakia

THE Checo-Slovakian Equestrian Federation is organizing this year a great international horse show, to take place at Pardubice from the 27th of September to the 3rd of October, as a part of the Physical Training and Sports Exposition. President Masaryk has agreed to be the sponsor; M. Udrzal, President of the Council, has accepted the honorary presidency. Both are fervent horsemen and great admirers of equestrian sport.

Pardubice is a great horse center universally known for its fox hunts and obstacle races. On the 4th of October will take place the great steeple-chase, a richly endowed test, with one of the most difficult courses in Europe. All horse show competitors are invited to take part in it.

The show events will be put on in the new Exposition stadium built for the occasion. The instructors of the Checo-Slovakian Cavalry School, which is at Pardubice, will organize the show in such a way as to give complete satisfaction to the contestants and to the public.

The show includes, among other events, 10 international jumping events, the principal of which will be "The President of the Republic's Prize," for teams of four riders from each nation, and two international schooling events, one of which corresponds to the "dressage" of the 1932 Olympiad.

Lucerne International Horse Show, 1931

THE Société Hippique of Lucerne has decided to organize again in 1932 an International Horse Show at Lucerne, which will take place from the 3rd to the 11th of July.

Events Overseas

By *Lieut. Col. Herman Beukema, Professor, U. S. Military Academy*

A LEAGUE "with teeth in it" is proposed once more. France has placed itself squarely behind the project offered September 1 by M. Paul Boncour, chairman of the Foreign Affairs Committee of its Chamber of Deputies, that the land, air, and naval forces of all League members be pooled to execute the mandates of that body whenever needed. The idea of such an international police force is not new. Brought forward by Leon Bourgeois in 1919 for incorporation in the Treaty of Versailles, it found no support outside his own country.

Judging from the immediate repercussions in Continental capitals, the thesis has small chance of acceptance. Too large the French military establishment, too solid and substantial the bloc of votes in the Council under French control for the mental comfort of rival Powers under such an arrangement. The press of London, Berlin, and Rome see behind the proposal a French hegemony permanently clamped on the Continent. Paul-Boncour has provided an active talking point in the diplomatic parleys preceding February's International Disarmament Conference.

After all, is it safe to hold the Conference? Or would it be wiser to postpone such a major surgical operation until an ailing world has recovered something of its normal health and temper? The prime movers behind the effort scheduled for February 2, 1932, are wondering whether they have not pushed matters so rapidly and at a time so unpropitious as to retard, or possibly to scuttle, every hope of success in this movement for world peace. If the declarations of Paris, London, and Rome over the past two months are to be taken at face value, deadlock already exists, five months before the gavel is raised. The French memorandum of July 21 to Geneva announces briefly that that country has already reduced her armaments to a minimum. Typically Gallie is the added remark that disarmament is a political not a technical question. Ramsay MacDonald likewise finds his country's defense preparations at the lowest point consistent with safety. Mussolini insists on quid pro quo. He will scale down only when and if his rivals do so, and only if he may retain an armament as strong as the strongest. Parity with France in brief. The intransigent tenor of such pronouncements is understandable when we note the fear on the part of Europe's political leaders that for many months at least the Continent will continue to be a boiling kettle of political and economic feuds. In such an atmosphere disarmament would strangle.

In spite of these obstacles, steady progress is made on the draft treaty which will constitute the working text of the Conference. Already it is obvious that limitation of aircraft, will constitute a major difficulty.

London and Paris, remembering the Zeppelin raids, wish to limit dirigibles as to number, volume, and horsepower. Military airplanes, under that proposal, are limited as to number and horsepower, and a further check is placed on strength of personnel. Whether there will be any attempt to interfere with that highly variable strength factor, the commercial plane convertible to military use, is doubtful.

The British Empire

United Kingdom. Labor is out. The MacDonald Cabinet which came into power on a tidal wave of votes June 5, 1929, resigned office August 24. Asked by King George to resume his duties as premier and to organize a new government of all parties, MacDonald assented. Within twenty-four hours he had secured the King's approval of a Coalition Ministry, in which Labor and the Conservatives both held four appointments, and the Liberals, two. Philip Snowden remains as Chancellor of the Exchequer. Stanley Baldwin, Conservative leader, and twice a premier becomes Lord President of the Council.

Parliamentary acceptance of the Ministry, when that body convenes September 8, seems a foregone conclusion. MacDonald can count on the solid support of the Conservatives, and probably of all the Liberals. How much more than a handful of the Laborites will follow him out of the Socialist fold is a question. For, note his words in his radio appeal to all classes of Britons: "I have not the Labor Party credentials for what I am doing . . . Be that as it may, I have the credentials of an even higher authority, those of national duty as I conceive it, and I obey them irrespective of consequences." Rank apostasy that, in the eyes of the Trades Union Council, executive committee of Labor. And promptly the four Labor apostates who hold portfolios in the Coalition Cabinet are read out of the party. In short, Labor has so far gone the road to Moscow as to declare that the interests of the proletariat supersede those of the nation. They refuse to see that wide open pit which has opened before British credit, the patent fact that its further depreciation will so strike British commerce and industry as to make intolerable the hard lot of the worker. Whatever Labor's view, England has decided to retain the services of MacDonald and Snowden, who, it seems, will be "kicked upstairs"—into the House of Lords.

MacDonald's economy program awaits detailed announcement, but higher taxes and a slash in expenditures are certain. The dole is apparently due for a ten per cent scale down, not enough by a good margin to bring it in line with the reduced cost of living. A political truce is guaranteed by the tripartite group

in support during its passage, and with that goal achieved, the bludgeons will be taken up again in preparation for a new general election.

An incident of note in this drama appears in the emergence of the Crown from the status of figure-head, to which British polities had relegated it in the past century. It was by the King's "command" that the opposition parties joined MacDonald in the fight for the nation's credit. Not since the emergency of 1915 has the world witnessed such an assertion of the royal prerogative in England.

The reaction in favor of British credit was almost instantaneous. Private banking interests in the United States and France raised \$400,000,000 within 36 hours to support the pound. Meanwhile, the Prudential Assurance Association of Great Britain mobilized a half billion in foreign securities for a similar purpose.

The Dominions. Canada alone holds her head safely above water, and even she shows signs of distress. The drought has given her a devastated area over a six hundred mile belt in the prairie region, covering an average depth of 150 miles just north of the international boundary. No merchantable wheat will be harvested there this fall. Relief legislation of all kinds will entail the highest national expenditures in history,—at a time when income is dangerously low.

Australia, having bravely chosen the hard road of honor, is considering the recommendations brought forward by an Economy Committee. If carried through, the Commonwealth will achieve savings for the fiscal year estimated at about a half billion dollars. And Premier Lang, New South Wales' apostle of repudiation and dishonor, ate crow when, hat in hand, he came to his Council for the funds to pay his Civil Service. New Zealand, like Australia, is paring defense appropriations in a drastic manner. The cut involved a complete reorganization of her military forces. Compulsory training is abolished. How difficult her situation has become may be realized from the fact that, requiring an export trade of £10,000,000 annually to cover the Dominion indebtedness, her exports today are virtually wiped out.

Western Europe

France. Cautious is the word of the hour. The Laval administration looks twice before each step in the snarl of Europe's polities—and strengthens its defenses. It joins hands with Russia,—but how far? We learn one day that a treaty of non-aggression has been concluded between Paris and Moscow, binding each party to neutrality in the event that the other is attacked without provocation by a third power or a coalition. Next day the Ministry of Foreign Affairs denies that any signature has consummated such an agreement. But there is an official communiqué which speaks of "steady progress" toward a commercial accord with Russia.

Help for Germany? Of course. But French short term credits to her rival are negligible. The risk is too great. Moreover, Premier Laval announces there "can

be no credits without confidence", or to translate, France wants political guarantees as to *Anschluss* and the *Treaty of Versailles*. Austria's action in renouncing *Anschluss* September 1 helps clear the way for future credits to Germany.

The "war in the air", Europe's great bogey, has become an obsession. Active preparation for and against it appears in the air budget for the new fiscal year, stepped up by \$7,000,000 to a new high of \$86,428,000. Hand in hand with these preparations for attack go the anti-aircraft defense measures, Marshal Petain having succeeded in rousing strong public interest spirit to the necessity of constant tests. Following Lyon, Toulon, and Nancy, Dunkirk was subjected in August to a large scale aerial attack. Permanent defense installations for Paris, Toulon, and Metz are expected in the immediate future.

Independence for Syria appears on the horizon as France declares itself ready to abandon its mandate. But there is a string to it. A firm alliance is to unite the new nation to France, blocking any possible appeasement of Italian land-hunger in that quarter. The project is expected to appear before the League Council at its next session.

French-Italian negotiations on naval reduction patter along, illuminated from time to time with vague reports of progress.

Spain. Spain zigzags confusedly. Radicalism and regionalism provide pitfalls and barriers to every constructive effort of Zamora's provisional government until the press, in early September, finds Madrid in the "totter" stage. Just what do the Spanish people want? The forced removal of a king and the curbing of the power of the Church had the support of the vast majority of the populace. From that point forward it has been a bitter tug of war between violently opposed elements, all determined to cut the cloth of the new government to their own pattern. Apparently, a liberal republic will be the offering of the Constitutional Assembly which began its labors in the closing days of July. But how liberal? Syndicalists, Marxian Socialists, Communists, and Republicans contest for the upper hand, showing no mood for compromise. The Socialists boast the strongest single party in the Cortes, but it falls sufficiently short of a majority to necessitate an alliance with the Republicans. And the militant minorities, Communist and Syndicalist, live up to their code of bad manners with strikes, riots, bombs, and what-not.

Disorder has become chronic, in spite of the repressive measures used by the police and army. Barcelona is, as always, the heart and center of extreme radicalism. Under virtual martial law for weeks, it nevertheless became on September 3 the scene of the most serious efforts to date toward violent overthrow of established government. Sindicato Unico, violently radical labor organization, succeeded in paralyzing all commercial and industrial activity by means of a general strike. After two days of hard fighting in which artillery was used on the Syndicalists' headquarters and arsenal, the strike appears to be broken, although

the Anarchists now order its continuance. An earlier and similar effort at Seville was nipped when the troops struck hard, arriving just in time to rescue the bakers who were being browned in their own ovens by their Moscow-minded employees.

Catalonia's referendum, August 2, on the question of autonomy for that province, indicates that only a minor fraction of one per cent of its population is opposed to that step. As a result, Madrid faces a demand, which, if granted, will leave the Catalans practically independent of that capital. Encouraged by Catalonia's action, the Basques and Galicians have also taken up the independence cry.

Central Europe

Germany. "This is an illiquidity convulsion, not an economic collapse," declared one of the financial experts called in to examine the Reich on its sickbed. The others agreed, and it became a question of diet and medicine rather than surgery. Today, the patient shows encouraging signs of convalescence. But there have been terrible sinking moments. Witness:

July 13—The Darmstaedter and National Bank, one of five largest in Germany, closes its doors. Several great industrial firms crash. Mark drops to 21 (par is 23.82).

July 14—All banks closed by decree over the 15th, trading on security exchanges prohibited.

Aug. 9—Fascists and Communists seek in referendum to dissolve the Prussian Diet, and secure new elections.

In each case remedies were found. Germany bravely chose the method of self-help,—reduced expenditures, more taxes. The financial representatives of the United States, Great Britain, France, Italy, and Belgium, backed by the Bank of International Settlements, provided means to further extend the short-term credits previously granted Germany. And the Fascists fell short by more than 3,500,000 votes of the number needed to topple the Prussian Diet. On that occasion the Communists, even more ugly than usual, were clubbed and shot into quiescence after two days rioting.

The immediate danger was over by the end of July. The mark again approached parity, German bonds rose in all foreign exchanges and the Reichsbank rediscount rate, raised to 15% at the height of the crisis, was dropped to 10%. Late in August a 7% rate became general throughout the country. Not till September 3, the day of reopening of exchanges, which had been closed for seven weeks, was German faith in the nation's stability put to a full test. Stocks were dumped at a sacrifice as high as forty per cent of their previous values, with few takers to be found. Foreign buying the following day ended the calamitous drop for the time being, but the future appears dubious.

Germany and Austria saved face, and little else, when on September 3, they publicly renounced their customs union. The announcement anticipated an unfavorable decision by the World Court, which has had the legalistic aspect of the matter under consideration. No bar to

German action in that direction was found by the Court, but Austria was found estopped by her commitments under the contract entered into by Vienna, when in 1922, she secured a loan from a group of Powers, members of the League. Schober, Austrian Minister of Foreign Affairs announced bravely that this is but a temporary setback, not ultimate defeat. Of greater importance than the Court decision was the fact that France, strongest opponent of the proposed union, today holds the whiphand over European finance, a fact which the impoverished Teutonic would-be partners cannot hurdle.

Italy. Bluster is no new element of Italian pronouncements. Senator Scialoja, Italy's representative at the Permanent Court of International Justice at the Hague, making his plea for Italy in the Austro-German Customs matter, stated bluntly that the decision might mean peace or war. Mussolini, speaking to his Blackshirts at Ravenna, declared in part, "We are ready to overthrow and destroy everything which may impede the march of the Fascist revolution." Repeatedly and from the outset he has denounced the international conferences at Geneva and elsewhere which are seeking a way out of Europe's economic morass. And he has so far abandoned hope of any desirable outcome of the approaching General Disarmament Conference, if we are to accept his statements at their face value, that he suggests a one year international truce on all armaments as a palliative. Finally, he proposes to give the League one more chance to solve the problem of Europe's economic rehabilitation. Failing in that he demands a free hand for Italy's quest of "harmonious relations" to avert the split of Europe into two hostile camps.

The mobilization of the Fascist Army is scheduled this year to take place in an area north of Venice, between the Piave and Tagliamento Rivers, not far from the Austrian and Yugoslav borders. No significance is attached by the Italian press to the site selected, even though the recent French maneuvers on the Franco-Italian border are taken into consideration. However, the ability of the Fascist auxiliaries to mobilize promptly and effectively for any emergency is to be made clear to the world. The annual air maneuvers, beginning August 26, in the vicinity of Spesia, involved the assemblage of about 1,000 planes, the largest air fleet ever brought together in Europe.

At this writing, the Fascist-Vatican controversy, Mussolini's most difficult domestic problem since May, seems to be over. Under the agreement forecast, the Vatican will be assured of full control over the religious education of Italian youth. In all other spheres the Fascist government will have direction.

Eastern Europe

Russia. Opportunist Stalin again startles the world with one of his lightning changes of policy. Briefly, the "class war" is over, and the Russian people are a united whole, if we are to believe his announcement. In particular, Stalin is making overtures to his skilled engineers responsible for the management of the gi-

gantic industrial establishments which are being set up under the Five-year plan. Invidious distinctions between the highly skilled personnel inherited from Czarist days and the younger dyed-in-the-wool Communists are swept aside. The reason for it all lies on the surface. Communist efforts to build a gigantic industrial plant have thus far been a history of one calamitous failure after another, except in those cases where foreign engineers (usually American) have had complete control. And the successive trials of the Czarist engineers for sabotage of these efforts have failed even to provide the necessary goat for the appeasement of national wrath. Hence the olive branch and cooperation—for a spell. At the same time, the foreigners are to be given a free hand, while the ignorant Commissars who can boast no merit beyond high-powered Communism, are pulled into the background in the administration of industry.

The coming winter worries Moscow. At no time since 1927 has the populace shown more severely than now the unremitting strain of close rationing, war psychology and ever-increasing "tempo." There are promises of a greater food supply for internal distribution, but on the other hand average prices have mounted a full fifty per cent under decrees whose object is to bring more ready cash to the Treasury. Looking beyond the winter, Stalin has recognized the need of a permanent increase in the supply of basic commodities,—in short, a higher standard of living. A new Five-year Plan accordingly takes shape, with the agronomists in charge. Production of live stock is to be increased by from 20 to 60% within the first year. Canning and dehydrating plants are to be erected. A distinct fillip is given by prospects of another record-breaking harvest this fall, increase in acreage having more than counterbalanced the damage incurred from severe drought.

Threats and blandishment alternate in Russo-Polish diplomacy. Large scale Russian maneuvers during mid-July in the vicinity of Minsk, near the Polish frontier are counterbalanced in a measure by Moscow's invitation to Poland for an exchange of information on armaments, as a preliminary to the approaching conference at Geneva. A rapprochement would greatly ease the road for the Franco-Russian treaty of non-aggression. But there are embarrassments. The discovery that Major Piotr Demkowski, brilliant Polish General Staff officer, was a Communist in Russia's service and was keeping Moscow informed of Poland's war plans is a case in point. His summary execution was ordered, and one Bogoboj, Russia's acting military attaché, hastily left for home.

Russian efforts toward armament production are pushed at a feverish pace, though with many a hitch. The new model guns turned out under German management were pronounced very pretty, but the steel refused to stand up under firing conditions. Inferior steel likewise puts a blight on tank production. Better success is reported in the output of aircraft, as signified by the flight over Moscow August 15, of the ANT-14, the first Soviet-built five-motored plane. Only

the DO-X and the Italian bomber KA-90 surpass it in size. It has a speed of 135 miles an hour.

The Balkans and the Near East

Rumania. Bank crashes which speak for themselves alternate with reports of dictatorship, of military alliances (affirmed and denied). The blossoming of the defensive alliance with Poland into a joint bulwark against Russia, under French direction, awaits full confirmation. Sizable orders for armament have been placed by Bucharest with Polish arms factories. Of equal interest are "Pravda's" reports that Rumania is establishing a naval base on Pasel Island, north of Constanza. Russia sees a threat from Great Britain and France, who are charged with inspiring this development to secure a base for future joint naval operations against Russia. Nor is Russian suspicion allayed by the material increase in strength of the Rumanian navy as a result of recent French and Italian deliveries.

Growing communistic infestation of the Rumanian populace is being dealt with drastically. Mere membership in the Communist Party is punishable by imprisonment from six months to three years. Active participation in propaganda is resulting in five to ten year sentences for the culprits. Military authorities have concurrent power with the police in arrest of offenders, and trial is by court-martial.

Bulgaria-Greece. The eleven-year old controversy over the repatriation of the nationals of both countries is coming to a head. Bulgaria has arbitrarily ordered all Greeks to leave the country within thirty days, reprisal according to Sofia for the earlier Greek action in expediting the departure of reluctant Bulgars from Greek territory. The special committee appointed by the League some years back to settle the quarrel has thrown it up as a bad job. Another problem for the World Court.

Turkey. The appearance of 25 Italian hydroplanes in the Black Sea for maneuvers in July has brought a prompt protest from Angora to the Straits Commission. A violation of the Treaty of Lausanne is charged, in that it prohibits passages of the Straits by a force greater than that of the most powerful fleet of the littoral powers of the Black Sea. Rome blandly protests that fourteen of the planes came overland.

Hungary. The retirement of Count Bethlen, "because of ill health" according to his own statement, coming hard on the heels of the loan of \$25,000,000 granted the Hungarian government by Paris, occasioned a flurry in the Continental press. Briefly, the premier's head was a part of the price charged by Paris, according to the German version. And with no end of glee these observers discover that Count Julius Karolyi, the new premier, sees "eye to eye with his predecessor," and that his Cabinet is at least a "shadowgraph" of the Bethlen Ministry. Whether the change will put an end to the growing influence of Italy and Germany in the affairs of Hungary is a question for the future.

The Foreign Military Press

Reviewed by Major Alexander L. P. Johnson

CANADA—*Canadian Defence Quarterly*—July 1931.

This issue contains an editorial on the Caribbean policy of the United States. Although the author regards that policy as essentially defensive in character, with security of the trans-isthmian canal route or routes as its sole basis, he, nevertheless, holds that in its practical application it is a contradiction of the Pan-American policy, albeit the two regulate the relations between the United States and Latin America. The methods employed in giving effect to the Caribbean policy, particularly in its economic and political aspects, have aroused serious apprehensions and misgivings, and so reacted against Pan-Americanism. That the underlying motives have been misunderstood is beside the point. The fact remains that the actions of the United States have had the most unfavorable repercussions throughout Latin America.

The Clark Memorandum on the Monroe Doctrine, and more recently, the course of action adopted in Nicaragua and Honduras suggest a definite change, not in the Caribbean policy, but rather in that phase of its application which was productive of much recrimination and misunderstanding. It is still too early, the author believes, to gauge the Latin American reaction to this change and, by way of conclusion, he whimsically observes, "We can not help wondering whether the application of this new 'policy of restraint' was not hastened by the recent British Empire trade drive in South America."

BELGIUM—*Bulletin Belge des Sciences Militaires*—April, 1931.

"The Infantry Regiment in Defense," by Lt. Col. Lesaffre and Capt. Fraeys.

A very interesting and instructive illustrative problem in troop leading, in which the authors cover progressively reconnaissance, preparation and occupation of a defensive position by a regiment of infantry. Appropriate field orders for each phase of the problem form part of the text. The dispositions provide two successive defensive lines in fairly close proximity; the second line is garrisoned by the regimental reserve. The study affords an excellent insight into Belgian defensive combat tactics and principles.

COLOMBIA—*Revista Militar del Ejercito*—Sept. 1930.

"The Work of the Chilean Military Mission in Colombia," By Colonel Jorge Mercado.

The last civil war in his country, writes Colonel Mercado, accredited Military Attaché of Colombia in Washington, had reduced the Colombian Army to the state of a barbarous horde. Organization, as far as there was such, depended upon the whim of revolutionary leaders rather than upon military reason or necessity. Recruiting became more or less of an organized man-

hunt. Corporal punishment was the basis and means of maintaining and enforcing discipline. The Chilean Military Mission, invited to Colombia by General Rafael Reyes while President of the Republic, changed all that completely. Some of the ablest officers of the Chilean Army were assigned to that interesting and important duty of rehabilitating, reorganizing and training Colombia's army, which, thanks to the unselfish and devoted services of these instructors, has become an effective and efficient military organization as well as an institution for the propagation of practical patriotism and good citizenship. The Chilean officers who participated in this work, the author writes, have earned for their country the everlasting gratitude and loyal friendship of every citizen of Colombia.

FRANCE—*La Revue d'Infanterie*—April, 1931.

"Tactics and Armament," by General Challéat.

The author, an experienced artilleryman, analyses the military properties and firepower of modern weapons in their relation to offensive and defensive combat tactics. Applying his deductions specifically to the weapons of the French army and their proper tactical use, he develops existing deficiencies in materiel as well as in tactics and technique, and points out the needs of the future.

The machine gun, light and heavy, is an effective weapon for defensive warfare. In offensive action, however, it is of little value against personnel under cover or against materiel. Because of its great mobility the machine gun is an effective weapon against assemblies of reserves and for harassing hostile troop movements behind the front. The author recommends the development of a special 30-mm. antiaircraft machine gun which should be subject to the regimental commander and for that reason located near his P. C.

General Challéat believes that the infantry's greatest need is an effective antitank gun. He regards the 75-mm. field piece as poorly adapted for that rôle. Unlike the machine gun it cannot lay down a continuous band of defensive fire to stop an advancing tank. Hence, it must continue systematic fire until it scores a disabling hit. That, the general believes, is largely a matter of luck.

Present infantry weapons, the author believes, are inadequate against an enemy in an entrenched position. The difficulty of keeping up the ammunition supply during an attack which has reached close proximity to the enemy, further complicates the problem. There are also serious difficulties in the way of close and effective cooperation between infantry and supporting artillery. This suggests to him the growing need for an "accompanying gun." Again, he regards the 75 as ill-suited for that purpose because of its weight. The author recommends the development of a 37- or 47-mm. cannon

capable of serving the need of the infantry against tanks and against entrenched personnel both in offensive and defensive combat.

Artillery armament, the author believes, leaves little to be desired. Such deficiencies as do exist he discussed in an article published in the April, 1930, number of the "Revue d'Artillerie". He advocates a more extensive use of shrapnel in lieu of H. E. shells for certain classes of interdiction and harassing fires and a more extensive employment of 75's for counterbattery work. He also believes in the desirability of adapting the 75-mm. ammunition for the use of reducible charges to permit a more effective adjustment of trajectories at short and mid-ranges.

Since the antitank gun is the tank's most formidable enemy, General Challéat suggests the necessity of developing a new, specialized artillery for tank support. This proposed organization he labels "armored regiment", because of the protective armor he believes each gun should carry against frontal and enfilade fire. General Challéat offers a simple plan for the tactical handling of this artillery. A gun accompanies each tank to the cover from which the tank is to debouch for the attack. The gun is emplaced in a suitable position previously selected and the gunners follow alertly the progress of the tank, and are prepared for immediate action against any hostile antitank gun which may open fire. He visualizes the tank and supporting gun as an inseparable team, with the tank advancing from cover to cover, awaiting at each halt the forward displacement of the supporting gun.

HUNGARY—*Magyar Katonai Szemle* (Hungarian Military Review).

By direction of the Minister of Defense, the various Hungarian military publications were consolidated, and have appeared, since January 1, 1931, as a united service monthly. The text, averaging 300 pages, is arranged under nine headings, each forming a separate section with its own editor. These sections are: 1. General Military Information; 2. Publications of the Infantry and Cavalry School of Musketry; 3. Technical Section: Engineers and Aviation; 4. Supplies and Administration; 5. Medical Section; 6. Publications of the Military Historical Archives; 7. Veterinary Section; 8. Sport Items; 9. Miscellaneous: Items of General Interest—Reviews of the Professional Press—Book Reviews. The table of contents is printed in Hungarian, German, Italian and French.

This excellently edited magazine is a publication of

the Royal Hungarian Military Historical Archives, Budapest, and is under the general editorship of Colonel vitéz Stephen Berkó. Annual subscription 12 pengös (about \$4.00). All officers of the active list and militarized officials of correlated services are required to subscribe to this publication, and provision is made for deduction of the fee from the officers' pay in monthly instalments.

GERMANY—*Militär-Wochenblatt*—July 18, 1931.
"Mounted Pistol Practice".

Mounted pistol practice has not received the serious attention in European cavalry organizations that is the case in the American service. It is, therefore, interesting to note that our system of training in the mounted use of the pistol is beginning to command attention abroad. The *Wochenblatt* acquaints its readers with the details of the course of instruction for mounted pistol practice prescribed by Training Regulations in force in the U. S. Army. Sketches showing the mounted pistol course illustrate the text of this article. By adopting the well-tried and successful American method of training, the author believes, the German army will be able to place its mounted pistol practice upon a broader and better basis.

INDIA—*Journal of the United Service Institution of India*—April, 1931.

"Aircraft and Internal Security in India," by "Comstabeel."

The employment of armed forces for internal security must be governed by the following principles:

1. Object: To restore normal conditions with the least exercise of force.
2. Forces of law should take and maintain the offensive.
3. Prevention is better than cure: hence arrest leaders, break up hostile organizations and quell disturbances in their initial stages.
4. Use force only against disorderly elements.
5. Action taken should leave neither bitterness nor resentment.

Aircraft may be used in case of civil disorders for reconnaissance, communication, moral effect, offensive action, and transportation. Conditions in India are such that the author is inclined to believe that aircraft will render most effective services in the field of transportation, effecting both economy of force and a saving in ultimate cost.

Revista de Equitación

The CAVALRY JOURNAL salutes the Mexican *Revista de Equitación*, founded by Major General Joaquin Amaro, Secretary of War, and edited by General Brigadier Rodolfo Casillas, a graduate of Saumur and Fort Riley. In addition to other interesting matter the magazine gives much space to the new Equitation Regulations, to prepare which General Casillas has been commissioned by General Amaro, himself an enthusiastic and finished horseman.

CURRENT TOPICS

1931 Cavalry Rifle and Pistol Teams

COMPETITION at Camp Perry was especially keen this year as is shown by the large number of competitors, some 2000 representing 113 teams from all over the United States.

Cavalry individuals were conspicuous on the rifle bulletins of every match. The Farr Rifle Trophy was won by Corporal Kellerman of the 12th Cavalry, who, with a service rifle, made the phenomenal score of 99 out of a possible 100 at 1000 yards.

The Cavalry Rifle Team placed second in the Herrick Trophy Match and in the Infantry Team Combat Match was fourth. In the Roumanian Team Match of 81 teams, the Cavalry placed second.

The Cavalry Team was outstanding in the Pistol and Revolver Matches. Sergeant Jensen, 7th Cavalry, won the Rapid Fire Pistol Match, and Sergeant Wilzewski took first place in the Army Pistol Match.

The National Rifle Team Match was fired on September 11th and 12th with 113 teams of ten men each. The Cavalry Team placed fifth.

Following is the composition of the Team:

1st Lieut. Geo. A. Rehm, 3rd Cav., *Team Captain*.
1st Lt. Clyde A. Burcham, 7th Cav., *Team Coach*.
1st Lieut. Paul McK. Martin, 6th Cavalry.
1st Lieut. Claude A. Thorp, 5th Cavalry.
Corporal Alex F. Kellerman, 12th Cavalry.
St. Sgt. Leslie H. Hedglin, 1st Cavalry.
Sgt. Roseoe R. Grider, 14th Cavalry.
Sgt. Richard V. Wilzewski, 8th Cavalry.
Sgt. Stanley Blazejovski, 3d Cavalry.
Corporal William G. Hamel, 4th Cavalry.
Sgt. Edward Yeszerski, 8th Cavalry.
Pfc. Halldur Hermanson, 14th Cavalry.

Alternates:

Pfc. Holger H. Christenson, 1st A. C. Sq. Cavalry.
Sgt. Gaines G. Wicker, 2d Cavalry.

The National Pistol Team Match was fired on September 8th with ideal weather conditions. The Cavalry won this match for the first time since its inauguration in 1920.

Following are the scores made by the Cavalry Pistol Team and the totals of the next five teams:

50 yds.	25 yds.	25 yds.	T. S. SF	G. T. TF
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1st Lieut. George A. Rehm, 3d Cav.
(Captain)
1st Lieut. Clyde A. Burcham, 7th
Cav. (Coach)
1st Sgt. Floyd Barrett, 11th Cav.
(Alternate)
Sgt. Jens B. Jensen, 7th Cav. 85 95 89 269
Cpl. Alex F. Kellerman, 12th Cav. ... 64 86 82 232
Sgt. Richard V. Wilzewski, 8th Cav. 81 97 90 268
1st Lt. Paul McK. Martin, 6th Cav. 74 85 75 234
1st Lt. George A. Rehm, 3d Cav. ... 81 93 84 258 1,261
U. S. Marine Corps 1,256
Infantry Pistol Team 1,253

U. S. Coast Guard Team	1,223
U. S. Navy Rifle Team	1,221
Field Artillery Team	1,200

Following is a congratulatory letter addressed to Major General Guy V. Henry, Chief of Cavalry:

My dear General Henry:

I desire to extend to you and the Cavalry the congratulations of the Infantry on the Cavalry's fine performance in winning the N. R. A. Pistol Team Match.

The Cavalry has had a long, hard fight, and this, I think, makes the victory all the more deserving.

With all good wishes for continued success, I am

Sincerely,

STEPHEN O. FUQUA,
Major General,
Chief of Infantry

As the representatives of the Cavalry service, the Cavalry Teams are much in the public eye, and I trust that, in the future, our unit commanders will send us their best men, as they did this year.

GEORGE A. REHM,
Team Captain.



Gold cup presented by the Minister of War, Chinese Republic, as first prize, Interallied Pistol Competition, Le Mans, France, June 28, 1919. Won by American Expeditionary Force Pistol Team and presented by them for annual competition as the National Pistol Team Match Trophy.

A Treasure Hunt

By a Stotsenburgian

TO EVERYONE who has served at Stotsenburg, the place holds many pleasant memories—polo games, golf, riding over the mountain trails, hunts for deer and wild boar, swimming, picnics on the Bam-bam,—capable, barefooted servants, noiseless as shadows, rather foreseeing your wishes than merely fulfilling them. One recalls the scurry of noisy, laughing children along the officers' line, followed and watched over by complacent, gossiping "amahs;" the pleasure of ever-fresh linen and "whites" immaculately laundered in the back of the house by the "lavandera" an expert chewer of betel nut, who only upon the most rare occasions allowed a telltale red drop to mar her otherwise perfect work.

Then, there was the delightful informality and intimacy of the five to seven calling hour, which has been the medium of many lasting friendships. One recalls informal dinners, the aroma of curry, the delicious mangoes, bamboo sprouts and banana buds; the trips to Chinese Charlie's in Angeles.

In 1926 Stotsenburg was an equestrian community of the first order. A large ladies' riding class was continually maintained; there was a continuous round of controlled rides, cross country hunts, paper chases, gymkhanas, horseshows, and polo tournaments. For all of these, suitable prizes were provided and boundless enthusiasm was shown.

A "treasure hunt," which proved a pleasure to the participants, was organized by the club entertainment committee over a course of approximately four miles and was so arranged that the few who did not enter mounted events might negotiate it by automobile. Necessary detours to obtain suitable automobile routes from station to station would entail delay enough so that the time required for a motor vehicle would be about the same as for a horse.

The riders were to proceed from station to station of the Treasure Hunt course in accordance with instructions received at the various stations. Some of these were of a more or less cryptic nature, while others presented relatively little difficulty. In this way, a card with the inscription "Equis infirmus, equus debilitatus" was intended to lead the field to the Veterinary Hospital.

Dignity was lent to the proceedings by the early visit to the domicile of the great Negrito King, Lucas the First, on the hog back, western slope of Target Hill. Lucas whiled away his regal time listening to the drone of the 30-30's, burrowed in the hillside for the lead at the conclusion of the day's firing; peddled air plants and bows and arrows to the officers; and, we suspect, visited the receptacles in rear of the officers' line, for we sometimes heard him referred to (we regret to say) by the derisive epithet of "Ash Can Johnnie." Lucas preferred the title of General to

that of King, and had a miniature uniform bedecked with stars which he donned when entering the post. Upon what he considered official visits he wore his sword.

At one of the stations the riders received the following:

"The ancient city of Troy
Which the Greeks tried to destroy.
Long stoutly withstood
Till a horse made of wood
Was used by the Greeks to decoy.

The Trojans fell for it strong
As told in old Homer's song,
Till a very great sage
Had it put in a cage,
And there it's remained all along."

—*Nepoleop.*

Simple enough. It was a horse race from there to the polo pen, newly erected in the center of the main parade. Right beside the old baseball grandstand, it should be stated for the benefit of old timers.

In the polo pen sat a small barefooted, befreckled, blond youngster, who wore a soiled rag about one great toe, ragged overalls, a straw hat with a torn brim and carried an old-fashioned bent pin fish line with a fish dangling from the end. From him they secured the final clue:

"What place in the post does the name Tom Sawyer at once suggest?

"For the benefit of those not acquainted with Mister Sawyer, I might state that he was a contract painter—specialty, white fences.

"'Mark Twain' is a term used in sounding and indicates a depth of two fathoms.

"I hope you can fathom this."

Up the parade ground, next to headquarters, in plain view from where they were, the hunters could see the ten foot, whitewashed fence, which surrounds the swimming pool. The maximum depth of this pool, by the way, is twelve feet, or two fathoms.

Ye gods! Some of them sought the school way over on the north edge of the post. Imagine Tom Sawyer in school—deliberately, knowingly and intentionally in SCHOOL!!!

The pool was the final station, and here was anchored the treasure, a small replica of Noah's Ark. Appropriate, too, for did not Noah land on Mount Arayat which rises above the surrounding plain 4000 feet in a mighty cone, twelve miles to the eastward? At any rate, that is how the mountain got its name, and this is justified to the satisfaction of the natives by the large depression in the summit of Mount Arayat.

Professional Notes and Discussion

The Mechanized "Cavalry"

TO THE EDITOR OF THE CAVALRY JOURNAL:

Speaking of the "Mechanization of Cavalry," Lieut. Colonel Scott, director of cavalry instruction at Fort Riley, informs the world in the "Rider and Driver" of June 18, that: "the great majority of Cavalrymen welcome the opportunity to develop it and to show what Cavalry can do with it."

Can this be so?—when they well know that the strength of the Cavalry arm has already been reduced far below what it should be. Why should not they, as well as the War Department, make proper representation to our legislative bodies and request that sufficient men be authorized for mechanization purposes, rather than having mechanization at the expense of present existing arms, especially the Cavalry arm—all of which are now reduced to the irreducible minimum for proper national defense?"

We are, in our army, very much impressed by new things. We are also much inclined to follow our English "cousins." Led largely by them we have adopted a new uniform, a new sword, a new saddle, (since abandoned), new formations for our cavalry regiment, etc. We have forgotten that in 1918 we believed we had the best cavalry in the world, made so by constant service in the field. Now we hear that the English, led by a few enthusiasts, have spent over a hundred million of dollars inventing and trying out a system of motorization of cavalry. It is a new fashion, a radical change. Should we follow it?

Lt. Col. Scott thinks that armored cars, moving as a body, may free cavalry from the exhausting work of reconnaissance. As an example he says "Armored cars may precede Cavalry by fifty miles or more, cover all roads" etc., working with aviation.

Let us form a picture of this fifty mile excursion to the front, in a section probably occupied by the enemy. The motor force must move slowly, or move fast. It is accompanied, of course, by scouting vehicles, auto cyclists, etc. If it moves fast no scouting can be done. Every wood, hedge, building along the road is a menace, possibly occupied by machine guns, anti-tank artillery or detachments of the enemy. Every bridge or culvert may have been prepared for demolition. The motor force having arrived in sight of the enemy, bang! A bridge in rear is blown up. The enemy's artillery arrive. The motor force is perhaps captured. It is confined to the road. It can't get away.

Suppose the motor force moves slowly. In that case the motor cyclists, etc., will be able to reconnoiter the woods, hedges, villages, etc., but only partially. They cannot enter woods or rough ground. The same result is liable to occur.

No, a motor force will not be able to make such a reconnaissance without the aid of cavalry. The cavalry scouting to the right and left will cause the motor force to move slowly. The advantages of speedy vehicles will be lost. The enemy will have time to prepare an attack. The vehicles cannot scatter in retreat, like cavalry.

I think it can be stated as an uncontrovertible fact that a motor force when on a reconnaissance must be protected by cavalry. I found that out in 1916 near Brownsville when an infantry force, carried by lorries, with an escort of a company of motorcycles, was disastrously ambushed three times in one mile by cavalry. It is difficult for motorcycles to reconnoiter off the road.

A mechanized force, like light artillery and machine gun units, will be able to accompany large bodies of cavalry in the advance guards and rear guards of armies; in important raids; in missions to seize and hold important positions; and in great cavalry battles. Whether motor forces will be, on such occasions, more useful than artillery or machine gun units is a question. On account of the tendency of machines to break down it is not improbable they will often interfere materially with the mobility of the cavalry. Only light tanks and armored cars should be used.

Speaking of tanks, we must remember that, in the world war, tanks were completely successful only when they were an entire novelty to the German soldier. This was no longer the case at the Battle of Amiens August 8-10, 1918, when the British went into action with 415 tanks and came out with only 67. All the rest were disabled by gunfire or otherwise.

Finally, as a nation whose vaunted policy is defense, we should employ our wits not so much in the invention of proper use of mechanized warfare devices as on the best way of destroying these engines of war. That should be easy, because that line of thought has not hitherto been much followed. The Germans made a start at it using anti-tank artillery, thermite and other bombs, attacks on the caterpillar treads, gas, traps, caltrops, etc. Let us use a little American inventiveness, and machines will be as useless in war as the German submarines and Zeppelins had become in 1918!

JAMES PARKER,
Major General, U. S. A., retired.

The Pumphrey Feed Box

THE EDITOR, THE CAVALRY JOURNAL:

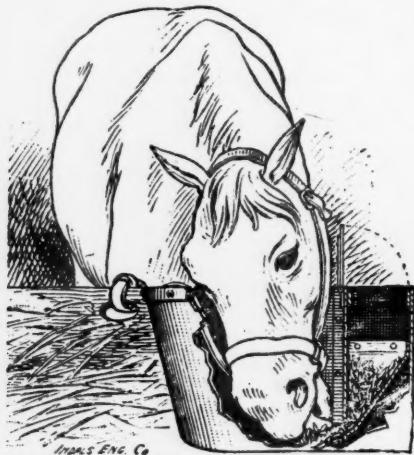
On pages 51-52 of your issue of July-August, 1931, we find some interesting advice on "Conservation of Forage," and setting forth the ill effects due to an occasional greedy horse bolting and wasting his oats.

As the writer of that article does not mention them, I assume he is not aware of the fact that feed boxes have been devised to correct this evil.

This box has a separate compartment (which the horse cannot open) in which the feed is placed. From this compartment the oats are fed by gravity little at a time through a $1\frac{1}{2}$ " opening at the bottom of the reservoir compartment into the main box accessible to the horse.

I had seven of these boxes in my troop some thirty years ago, and found them entirely satisfactory.

The accompanying illustration explains the working of the box. The same firm also sold an Oat Cleaner



The Pumphrey Feed Box.

designed to automatically remove dirt and trash from oats before being fed.

As to wastage of hay, it is even more important in the field than in the garrison to prevent this.

Just before the Cavalry Drill Regulations of 1916 went to press, the undersigned prevailed on Col. W. D. Beach, President of the Board, to insert near the end of paragraph 978 the following instructions:—

In each troop a man is detailed to walk the picket line while grain is being fed to look out for the horses generally and to take off the feed or nose bag of a horse as soon as he has finished feeding.

W. C. BROWN,
Brig. Gen., U. S. A., Retired.

Notes from the Cavalry Board

Adaptation of the 37 mm. gun to pack.—For more than three years the Board has studied the vexatious problem of transportation for the 37 mm. gun. Various expedients have been tried and eliminated, such as wheeled transport and several attempts at packing. The latter contemplated using a hinged trail and placing the barrel on one side of the pack and the recoil mechanism on the other. Altering the trail by reducing its length, by the addition of hinges in its center, and by making certain changes in the position of the front leg, have all failed to produce the desired results,

in that they did not combine gun stability (when gun is in action) with packing facility.

The problem of pack, however, has been successfully solved, the gun and ammunition having recently been transported in pack on a three hundred and fifty mile march and more recently on a forced march of one hundred miles in twenty-three hours with satisfactory results.

Captain Thomas J. Heavey, Jr., of the Cavalry School faculty has been collaborating with the Board in its efforts, and it is believed that he has produced a solution to the problem. Captain Heavey's original modification consisted of three major changes in the issued equipment. First, the trails were shortened so that the overall length of the issued tripod in pack was approximately the same as that of the .30 caliber water-cooled Browning machine gun. Second, the traversing mechanism was modified so that a hand wheel mounted on the outside of the left trail rotated the traversing screw, permitting continuous traverse. This traversing screw was also hinged to the inner side of the right trail and when assembled to the traversing hand wheel axle functioned as a spacer for the trails. Third, the front leg assembly was dispensed with, and substituted therefor was a front spade, thus lowering the pintle approximately five inches.

This mount was used by the 13th Cavalry during the school maneuvers of 1930-31 and by the Department of Cavalry Weapons, The Cavalry School, in actual firing of service ammunition during the school year 1930-31.

During one of these maneuvers the gun in pack was moved nine miles in about forty minutes, the gun squad taking six jumps in Forsyth Canyon without any mal-adjustments of the pack load or undue distress to the pack horses.

Actual firing tests of the gun indicated that due to the short trail the mount was not stable, the whole gun and tripod jumping up at each shot. However, this "jump" did not appear to affect the accuracy of the gun.

Firing on moving targets indicated that the gun, mounted on the short trail tripod, was effective at ranges of 1000 yards and under. Approximately 30% hits were obtained by the 13th Cavalry squad. At greater ranges effectiveness rapidly decreased.

Additional modifications of the original design were completed in October, 1930, consisting of the substitution of duralumin alloy metal for the spades and traversing hand wheel and the assembling of telescopic segments to the short trail. The saving of weight in the use of duralumin permits the incorporation of the extension trails with the actual saving in weight of six ounces. The telescopic trails increase the length of the trails $11\frac{3}{4}$ inches and when in the closed position do not increase the total overall length of the tripod in pack.

Firing tests of the telescopic trail mount indicated that the instability of the original short trail mount is nearly completely neutralized. This results in much more effective fire on moving targets, as the gunner

can, with no undue discomfort, keep his eye to the sight, thus increasing the rate of fire. This is a distinct advantage in all types of fire.

Hangers of different design from the standard cavalry pack hangers are used on both gun and ammunition loads, in that main supporting members are of light ribbed metal, cross braced by circular steel rods, all joints being welded. This results in approximately 50% saving in weight. The average weight of the hangers is under eight pounds.

The total weight in pack of the gun and tripod is approximately 209 pounds. Total weight of ammunition in pack (64 rounds) is 199 pounds.

The gun may be mounted from pack, loaded, laid, and fired in 31 seconds, and put in pack from action in approximately the same time. Rate of fire on a stationary target is the same as with the issued mount. Thirteen rounds have been fired on a moving target in one minute. The present low explosive shell has obtained complete penetration of $\frac{5}{8}$ " steel boiler plate prior to explosion at 550 yards in test firing.

The detachable shoulder guard, appearing to be unessential, has been dispensed with.

Semi-automatic arms.—Test firing with the Pederson and Garand semi-automatics was started on June 15th and has just been completed. The test of these arms involves the firing of Course A, both preliminary and record, combat firing, sustained fire test, functioning test, anti-aircraft firing, stripping and assembling test, and test to determine the effect of carrying in a rifle scabbard. Firing with these arms has been so conducted as to admit comparison between scores and performances with these rifles and those under similar conditions with the .30 caliber rifle, M1903.

During the firing various malfunctions have been encountered; in general, due to failure to feed cartridges into the chamber, failure of cartridge to rise to loading position, and failure to eject properly. These malfunctions were later traced as due almost entirely to dirt in the cartridge clips. The rifles function very well when clean and properly oiled. When hot and dusty, especially when dust and grit get into the clips, trouble is encountered. Some difficulty is being encountered with the accuracy of these weapons at the longer ranges; however, they are a great step forward, even at this state of incomplete development.

German Cavalry¹

The Performance of Our Cavalry Horses in the 1930 Maneuvers

By General of Cavalry von Posek.

Digest from "Sankt Georg."

THE 3rd Cavalry division, composed of the 13th, 14th, 15th, 16th, 17th, and 18th cavalry regiments, with the 10th cavalry and two mounted detachments attached, formed the maneuvering force. The 3rd Cavalry division being one of the few full strength

Translated by Major Otto Wagner, Cavalry.

divisions, it was possible to make valuable observations as to the performance of the troops. It may appear at times that, with the great technical improvements of the mechanized force, the horse has outlived its usefulness as a means of transportation. That, however, is still in the distant future.

It is of interest to know how the horse got along and what he accomplished during the last maneuver.

This problem began on the 15th of September with a march over the mountains of the Thuringian Forest. Three regiments of the division had already taken part in Brigade maneuvers. The march began in the area of Gotha, advancing by brigades on three roads as far as Unter-Massfeld south of Meiningen. The main column marched about 60 km., the reconnaissance detachment about 90 km., and the patrols about 110 km. It rained in torrents and the troops had to march over smooth, hard surfaced roads with no soft shoulders on the side to give the horses a soft footing. In addition the grades were very steep. The horses had to be led up hill for long periods. Going down the gait was at a walk. Machine gun and communication carts had to have a draft of six horses to keep up.

The division continued the march further south the next day advancing in two columns. By its rapid advance it surprised the West wing of the enemy; a wide turning movement threw him to the East and forced him into an unfavorable position. The main column, in executing this movement, marched about 50 km.; the total distance for the first two days being 110 km. While the distances travelled during the last two days of the maneuver were less, the difficulties encountered were greater. It rained continually, the dirt roads were bottomless, and the terrain was very hilly. This steep and hilly terrain made unusual demands upon the regiments that had been stationed in the low country and were unaccustomed to hills. Combat and reconnaissance patrols received the brunt of all these obstacles as they had to move over the worst roads, across plowed fields and meadows.

The horses maintained their freshness, very few going lame. The review held at the end of the maneuver disclosed no fatigue on the part of the animals. The gait was rather too fast, a sign that the horses were full of energy and spirit in spite of the past hard work. The cavalry has again shown in this maneuver that, correctly handled, cavalry with its present increased fighting power is still an important and decisive factor in war. For the cavalry to be able to fulfill its mission, it is necessary that it have its horses properly trained in every respect. The doctrines of the training regulations must be followed.

The records show that our troopers' mounts, developed according to our principles of training and equitation, gave longer service in the war than the mounts of any other participating nation.

The cavalry horse in war must serve in ranks, on patrol duty, and on messenger service, with a rider comparatively unskilled according to "Modern Equitation" standards. He must do hard work in a creditable fashion. The last maneuver proved again that in every respect he is well able to do it.

Organization Activities

1st Cavalry Fort D. A. Russell, Texas

CAPTAIN Donald Dunkle, commanding Troop E, distinguished himself as high score rifleman for the regiment with a score of 331.

On July 11th, an excellent Gymkhana, followed in the afternoon by races and polo, was held. Major A. T. Lacey, Lts. Logan C. Berry, John G. Minniece, Jr. and Milton A. Aklen wore the colors for the First, in the game against the Marfa polo team. Horse show matinees were held August 16th and 30th in the parade ground horse show ring. Under the direction of Lt. Col. R. M. Cheney our show material is rapidly taking shape.

For the encouragement of athletics and to better finance such activities, the First Cavalry has recently organized a Regimental Athletic Association with Lt. R. T. Willson in charge.

A weekly bulletin, known as the Black Hawk Bulletin, has been started this summer and contains news of interest to the entire garrison.

Recently assigned to the First Cavalry are: Capt. John C. McDonald, Capt. William Kenahan, Lt. George V. Ehrhardt, and Lt. Basil L. Riggs.



3rd Cavalry (Less 1st Squadron) Fort Myer, Virginia

THE Fort Myer Horse Show Team competed in the Warrenton, Rochester, and Bryn Mawr horse shows. Results at the Rochester show, attended by Colonel Harry N. Cootes, Major A. D. Surles, and 1st Lieutenants C. H. Noble, W. A. Bugher, and C. W. Bennett, were the most outstanding of the three. The Myer string was highest winner in the jumping events and broke the record for competition of military teams at Rochester shows. The five day Touch and Out class and the \$1000 Jumping Stake were among the classes won.

Troop F, commanded by Captain H. J. Fitzgerald,

performed its excellent rough ride and tandem drill at each performance of the show.

Machine Gun Troop, commanded by Captain C. H. Palmer, took part in the West Virginia State Fair at Wheeling, West Virginia, from September 7th to 12th.

The Winchester Fair, at Winchester, Virginia, featured exhibition drills by Troop E, Lieutenant D. W. Sawtelle, commanding.

From September 21st to 30th, the regiment made a practice march through Virginia. Included in the field exercises was a cooperative mission with the Air Corps, which took place at Marshall, Virginia. Here also, an exhibition ride was given for the residents of the vicinity.

Officers recently transferred from the regiment are Major J. W. Cunningham, Captain L. G. Gibney, and 1st Lieutenant R. A. Gardner. New arrivals are Captain G. I. Smith, Captain L. K. Truscott, 1st Lieutenant L. M. Grener, and 2nd Lieutenants J. K. Waters and L. F. Cole.

4th Cavalry Fort Meade, South Dakota

THE 4th Cavalry returned to the post Sunday, August 30th, from its regular annual practice march. The itinerary of the march was as follows:

Deadwood, Cheyenne Crossing, Spearfish, Belle Fourche, Orman Dam, Vale, Bacand's Ranch, and back to Fort Meade. The troops engaged in maneuvers each day while in camp at Orman Dam.

Warrant Officer Tito Lipartiti, arrived at this station Saturday, August 29th, and has been assigned as Band Leader of the 4th Cavalry Band.

Master Sergeant Fred Conway, Headquarters Troop 4th Cavalry, was placed on the retired list on August 31st. He departed the same day for El Paso, Texas where he intends to reside for the present.

10th Cavalry Fort Huachuca, Arizona

THE 10th Cavalry Band under the leadership of Warrant Officer Wade H. Hammond, 10th Cavalry, has just completed a remarkable tour through the States of Arizona, New Mexico and Texas. It covered a distance of 2261 miles by motor transport and appeared in concert in twenty cities, including El Paso, San Antonio, Waco, Austin and Dallas.

The Commanding Officer, Colonel Sherburne, has given historic significance and atmosphere to the post by naming the principal streets and roads after former distinguished members of the regiment. This action is appropriate in view of the fact that Fort

Huachuca has been for so many years the home of the Buffalo Regiment. The officer's line bears the name Grierson Avenue.

The regiment celebrated its 65th anniversary on Organization Day. The 10th Cavalry was organized at Fort Leavenworth, Kansas, on July 28, 1866. It was particularly fortunate in the selection of Colonel Benjamin H. Grierson as its first commanding officer, and who continued to command it for twenty-two years. Colonel Grierson was one of the famous cavalry leaders developed during the Civil War. He had the distinction of having once met and defeated the redoubtable Forrest. His famous raid from La Grange, Tenn., through Mississippi to Baton Rouge, La., so diverted the Confederate forces operating to relieve Vicksburg that Grant was able to transfer his army to the south of Vicksburg and so hasten its fall.

A feature of the Organization Day program this year was the presentation of the annual Shipp Memorial Cup to Technical Sergeant William F. Scott, Headquarters Troops, as the most distinguished soldier in the regiment. This cup is donated annually by Mrs. Margaret B. Shipp, mother of the late Captain Fabius B. Shipp, 10th Cavalry.

The Horse Show Trophy presented by the Bisbee Chamber of Commerce went to Lieut. Harold N. Forde, 10th Cavalry, winning the highest number of points in officers' competition. The trophy presented by the Tucson Chamber of Commerce went to Private Oscar Boone, Troop F, 10th Cavalry, enlisted men's competition.

Troop F and Troop A tied in the highest number of points won by organizations.

A tragic aftermath of Organization Day, celebrating the proud history of the regiment, came in the form



Vale! The 10th Cavalry "Key Men" Returning Saber for the Last Time.

Left to right: Master Sergeant H. C. Scott, Headquarters Troop; First Sergeant R. T. Brown, Machine Gun Troop; First Sergeant L. M. Carter, Headquarters Troop; First Sergeant John Allen, Troop B; First Sergeant John Sanders, Troop F; First Sergeant McCalister Weeden, Troop E.

of an order from the War Department placing it on an inactive status. The regiment on October 10th and 11th moves to stations as follows:

Headquarters and 1st Squadron—Fort Leavenworth, Kansas.

2nd Squadron—West Point, N. Y.

Machine Gun Troop—Fort Myer, Virginia.

The passing of the 10th Cavalry as a combat regiment is an event of note and will come as a shock to the many distinguished officers and soldiers who have served with it. The 10th Cavalry *returns saber* with a proud consciousness of duty well done. The past will preserve for it a record second to none.

For the future we can confidently predict that it will carry on in its new rôle with the same loyalty and high spirit that has given its motto a living meaning, "Ready and Forward."

108th Cavalry Atlanta, Georgia

THE Machine Gun Troop of the 108th Cavalry, Georgia National Guard, (known in the South as The Governor's Horse Guard), more than lived up to its reputation during the summer encampment period at Fort Oglethorpe, Ga. It was declared the Blue Ribbon Troop of the regiment with a proficiency average of 96.01 per cent and, by virtue of this award, will act as color escort at ceremonies during the coming year.

Captain Theodore Goulsby, commanding officer of the Machine Gun Troop, was presented by the men of his troop with a beautiful piece of silver service in recognition of his twenty years of untiring national guard service. Captain Goulsby went to the Mexican Border with Troop L, 1st Squadron, Georgia Cavalry and later saw service overseas. Appropriate speeches of presentation were made by Colonel J. E. Edmonds, commanding the 108th Regiment and by Major J. B. Fraser, commanding the 1st Squadron.

Among the individual awards in the troop was the presentation to Sergeant William A. Smith of the Colonel J. B. Osborne trophy as the outstanding trooper for the past year. Annual perfect attendance medals were awarded to Sergeants W. A. Smith, Perry Hoey, P. P. Stone; Corporals Albert Arnaud, J. B. Nunes, G. J. Graham, Camp, and Private Henry Stokes.

A most successful dance was given at the Officer's Hop Hall at Fort Oglethorpe as a part of the activities of the week-end of August 8-9.

Later in the week, with the assistance of a three goal handicap the Horse Guard team won a fast and exciting victory over the strong Sixth Cavalry team of Fort Oglethorpe. The Horse Guard has aspired to this victory for a number of years, but this is the first time the Atlanta team has been able to turn the trick. The game was won in the last fifteen seconds of play with a 75-yard goal by Christian. Lieutenant Moran and his players hope that this game has broken the Sixth Cavalry jinx.

305th Cavalry Philadelphia, Pa.

THE regiment has returned from its tour of active training at Fort Myer, Virginia, and vacation days are over. The regiment is preparing for the inactive training season 1931-32.

Notices have been mailed out for a meeting at which

time plans will be made for the winter training. The Unit Instructor has a problem made up which the regiment will work out on the actual terrain at Major Livingston's farm. This problem will be worked out the same way as the one held last Spring, using automobiles in place of horses.

306th Cavalry Baltimore, Md.

THE active duty training for the 306th Cavalry was held at Fort Myer, Va., from August 2nd to August 15th, 1931. A schedule was carried out which filled every minute of the day with good hard work. The following officers attended:

Colonel John Philip Hill, Lt. Col. Matthew F. James, Major William H. Skinner, Major Geary F. Eppley, 1st Lt. Lester H. Kyle, 1st Lt. Linden L. Sanders, 1st Lt. Thomas H. Mundy, 1st Lt. Paul A. Chalupsky, 2nd Lt. Lathrop E. Smith, 2nd Lt. John W. Mann, 2nd Lt. Kenneth S. White, 2nd Lt. George W. Ellison, 2nd Lt. Claude N. Balenger, 2nd Lt. Robert W. Brown, 2nd Lt. George B. Campbell, 2nd Lt. Lawrence S. Carson, Jr., 2nd Lt. George E. Monk, 2nd Lt. John S. Burgess, 2nd Lt. Raymond B. Carlton, 2nd Lt. Emil W. Kerttu, 2nd Lt. Samuel Letvin, 2nd Lt. John B. Naughton, 2nd Lt. Jesse T. Nicholas, 2nd Lt. Ernest J. St. Jacques, 2nd Lt. Joseph W. Clautice, and 2nd Lt. Alexander Gow, Jr.

Two enlisted men of the regiment attended the camp at their own expense. The officers of the 307th Cavalry were in camp at the same time, and many pleasant friendships were renewed.

2nd Squadron and Machine Gun Troop 306th Cavalry, Washington, D.C.

MAJOR H. C. Dagley reported for duty on August 27, 1931, succeeding Lieut. Colonel A. G. Hixon, as Unit Instructor. Major Dagley is a graduate of the Advance Class, Cavalry School, and of the Command and General Staff School, and comes to us from five years of duty with R.O.T.C., Ninth Corps Area.

307th Cavalry Richmond, Va.

THE 307th Cavalry attended camp at Fort Myer, Virginia, August 2nd to 15th, on an active status. Nineteen officers of the 307th Cavalry and one of the 154th Cavalry Brigade attended.

The following officers qualified with the Pistol:

Expert

1st Lt. Watson P. Gooch.

Sharpshooter

Major Edward N. Hay, 1st Lt. Walter L. Renn, 2nd Lt. William W. Morrell, and 2nd Lt. Beverly E. Winfree.

Marksman

Major James R. Mullen, Captain Hal P. Costolo, 1st

Lt. Gorham B. Walker, Jr., 2nd Lt. Charles E. Gifford, 2nd Lt. Frederick Sale, 2nd Lt. Asher R. Payne, and 2nd Lt. William L. Threlkeld.

3rd Squadron and Machine Gun Troop 307th Cavalry, Norfolk, Va.

OUR officers of the Third Squadron and Machine Gun Troop, 307th Cavalry, enjoyed a most delightful and instructive tour of active duty training at Fort Myer, Va., August 2-15, 1931. The officers who attended camp being:

Major James R. Mullen, 1st Lieut. Walter L. Renn, Jr., 2nd Lieut. Charles E. Gifford, and 2nd Lieut. Harry P. White.

The Unit Instructor, Major David H. Blakelock, is preparing training schedules for the inactive training of officers of the squadron and machine gun troop for the period October 1 to June 30.

308th Cavalry Pittsburgh, Pa.

FROM July 19 to August 1, 1931, the 308th Cavalry officers who attended camp at Fort Myer, Virginia, conducted C. M. T. C. training and thoroughly enjoyed the experience.

Riding classes at the Hunt Armory will be resumed October 4th and will thereafter follow the usual schedule. Many officers have been riding outdoors throughout the summer.

Lieutenants Goldsworthy and Thomas and Sergeant Cence who during July made a two weeks horseback trip through the mountains reported many adventures.

The 308th Cavalry Club house at which the meeting on July 11th was held will be the scene of many of our activities this year.

Plans are on foot for the first unit meeting early in October.

862nd Field Artillery (Horse) Baltimore, Maryland

DURING August the Regiment under Lieutenant Colonel Roger S. B. Hartz received its fifteen days of active duty training at Fort Hoyle, Maryland, under the tutelage of Battery F, 6th Field Artillery. Nearly fifty percent of the officers turned out. Business and pleasure were well balanced to the end that while the hours of training were well filled there was no dearth of swimming, tennis, golf and social activities. One important departure from the usual course of instruction was the qualification of almost all of the officers of battery grades as First Class Gunner.

309th Cavalry Asheville, N. C.

THE 309th Cavalry participated in active duty training at Fort Oglethorpe, Ga., during the period July 26-August 8, 1931.



BOOK REVIEWS



ORDER OF BATTLE OF THE UNITED STATES LAND FORCES IN THE WORLD WAR—A. E. F. DIVISIONS. Prepared in the Historical Section, Army War College. U. S. Government Printing Office. 450 pages. \$1.50 (buckram).

This publication was compiled in the Historical Section, Army War College, from original sources in the War Department archives. The necessary research, pursued from 1926 to 1929 by Lieutenant Colonel Henry Hossfield, was carried to completion in 1931 by Lieutenant Colonel Robert T. Phinney, Major John C. Bartholff, and Warrant Officer Charles H. Collins. For the first time, it makes available a comprehensive official digest of the principal events in the histories of the 43 American divisions that served in France, together with an accurate day by day record of their front lines and combat sectors.

The text is limited to a statement of facts, without comment. It covers organization, transportation to France, movements to training areas and combat sectors, battle participations, and post-armistice activities, to include return to United States and demobilization. In addition to these narratives, the book contains tables which give the names of divisions and brigade commanders and the divisional chiefs of staff with appropriate dates; the units that constituted or were attached to each division; assignments to corps and armies; and the location of division headquarters from the date of organization to demobilization.

This book is one of a series now being prepared by the Historical Section, Army War College. Subsequent volumes will present similar data for G.H.Q., A.E.F.; First, Second, and Third American Armies; I to IX American Army Corps; the Siberian Expeditionary Forces; Service of Supply; and the Zone of the Interior.

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THE BATTLE OF DORA, by H. E. Graham. William Clowes and Sons, Limited, London, 1931. 75 pages and 6 maps.

This is a clever and interesting tale of the employment of a brigade of fast tanks around the exposed flanks of opposing armies. History being inadequate, the author has created his own international and military situations which, rather naturally, are exactly suited to his purposes. While Anglia is obviously Britain, Jugurthia and Martia have been divested of resemblance to existing nations.

Six infantry divisions of Anglia, within the boundaries of the friendly Jugurthia, are opposed to six infantry divisions of Martia. Martia also has six reserve infantry divisions that are to become available

for combat in the immediate future, but, offsetting that, Anglia has an armored brigade which includes two light tank battalions (100 tanks), one medium tank battalion (55 tanks), and two close support tank batteries (12 tanks with 12-pdr. armament). The author has also injected into the armored brigade some highly mobile artillery consisting of 18-pdr. guns and 4.5 howitzers. A prime purpose of this artillery is said to be the slaughter of the hostile foot troops that crowd into "anti-tank localities" when threatened by tanks.

The author gives his armored force a rather heavy load of tasks, requiring it first to check the approach of the most advanced hostile reserve division, then to engage, in conjunction with the main attack, the hostile division in tactical reserve nearest the point of the Anglian main effort.

One might properly criticize the actions of Brigadier General John Carburettor for dispersing his command so much in his first task. The author, however, realizes that point of vulnerability and acknowledges in his preface that he expects such criticism.

As Americans, we are struck by the informal manner exhibited in the giving of important tactical orders. Such informality might be indicative of a masterly competency, but certainly an American officer would attempt to be more seriously methodical. Like his brothers in civil life, he would desire to be more "businesslike."

The author makes his officers efficient; his situation is appropriate, simple, and satisfactory; his solution is, for the most part, sound and acceptable (though perhaps a bit optimistic in spots); and the story is told with a commendable degree of thoroughness, clarity, and conciseness. Anyone at all progressive minded in the tactical field will read this book with much pleasure and appreciation.

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THE CHALLENGE OF RUSSIA, by Sherwood Eddy. Farrar and Rinehart, New York, 1931. 8 1/4" x 5 3/4"; 278 pp.; \$2.50.

"This book is written in the conviction that Russia constitutes a challenge to America and to the world," and Mr. Eddy then proceeds to show the nature of that challenge.

Though well known as a man of liberal beliefs, associated with many pacifist and radical organizations, the author can hardly be called a great admirer of Soviet Russia. He has made four visits to that country since the Revolution (two during Czarist days) and is unhesitating in his condemnation of the dictatorship that exists there; of the policy of world

revolution by violence and "of the intolerance, bigotry and persecution which spring from the Marxian dogma of communism," citing many instances to illustrate these failings in the Russian system.

At the same time he praises what has been accomplished in the education and culture of the masses and in the industrial and agricultural progress which has taken place during the past decade. Mr. Eddy claims that the five-year programme, now half completed in point of time, is considerably ahead of that in achievement and that Russia will have an enormous effect on world economies in the very near future. In 1921 industrial production had fallen to 17% of pre-war figures, while in June of last year Stalin reported that it had then been raised "to 180% of the pre-war maximum," five per cent. more than the estimate of the five-year plan. The production of agricultural machinery is "five times the pre-war amount and it will likely soon surpass even the United States." This machinery is being used in the state and collective farms all over Russia. Individual holdings are discouraged, to put it mildly, and are gradually passing out, while the "collectives" are increasing rapidly, as shown by the fact that they planted 90,000,000 acres in the second year of the plan as against 51,000,000 called for during the closing year of the five-year programme.

Mr. Eddy gives a graphic example of this collective farming by citing the case of fifty Russians who returned to their own country from the United States in 1921. "They started with nothing but their bare hands and these empty buildings (formerly the property of a Russian general and race-horse breeder). The first year they were so poor that they were reduced to eating crows and at times even weeds. Today their assets, apart from the land, are \$60,000 and the membership of the commune has increased to 238 persons operating fourteen hundred acres." A clear picture is presented of the aims and actual working of the five-year programme.

The author combats the prevalent idea that morals are loose in Soviet Russia. "For a short time after the Revolution there was a period of license when all restraint was considered 'bourgeois,' but today promiscuity or sensuous indulgence or dissipation is 'counter-revolutionary.'

There is an ascetic vein in Soviet Russia. Moscow looks like a bleak Puritan city in comparison with the brilliantly lighted gaiety and night life of New York or Chicago. There is practically no public round dancing. The one gambling house recently closed its doors." One wonders whether this is due to morality or to lack of the necessary funds. "The gist of the new moral code and practise is personal freedom based on social welfare. The weight of revolutionary public opinion is for social welfare not individual license.... Divorce is slightly more prevalent in Russia than in the United States" although it can be obtained by mutual consent without alleging any grounds.

Mr. Eddy is unsparing in his criticism of the intolerance which exists in Russia, particularly in the religious field. While nominally all religions are permitted the only one really tolerated is the religion of communism as taught by Marx and Lenin.

True to his reforming principles the author makes a plea for the adoption of certain ideas in this country not all of which are Russian in origin. Among these are the government protection of workers against accident, illness, old age and unemployment and the public ownership of "strategic industries as are now being grossly mismanaged or which are gouging the public," citing coal and electric power as examples. The removal of high tariffs on manufactured goods in order to lower prices to the farmer is recommended also the reorganization of the judicial system "to the end that the courts may work more speedily, more justly and with less autoocracy than in the past." The suggestion of most interest to the army is directed against the so-called imperialistic policies in Latin America, together with reduction of the military and naval forces, recognition of Russia, entry into the League of Nations, independence of the Philippines, etc.

This book is worth reading as it presents the viewpoint of an American liberal on the experiment in government now being conducted in Russia, together with an able exposition of what is actually happening in that country. No one will agree with him entirely; conservatives will consider him too radical while communists will condemn his moderation, but the thinking reader can profit by a careful perusal, whether or not he agrees with the author's conclusions.

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HORSE TRAINING; OUTDOOR AND HIGH SCHOOL, by *E. Beudant*, Ex-Captain, French Cavalry. Introduction by Lt. Col. John A. Barry, U. S. Cavalry, the translator. Charles Scribner's Sons, New York. \$3.50.

(To be reviewed in a later issue)

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MODERNE KAVALLERIE. (Modern Cavalry. Reflections on its Employment, Leadership, Organization and Training.) By *G. Brandt*, Lieutenant General, retired, late Inspector of German Cavalry. *E. S. Mittler & Son*, Berlin, 1931.

Reviewed by Colonel G. M. Blech, Medical Reserve Corps.

General Brandt has published a number of valuable contributions on cavalry tactics which have placed his name among the internationally recognized authorities. He now presents a small but weighty book which is devoted to the principal cavalry problems of the future. In commenting on this book no less a personage than Field Marshal v. Mackensen accords Brandt the recognition of being the most authoritative person to treat the problems which are just now agitating many minds, both here and abroad.

The first 20 pages are devoted to a historical review. Of the World War he says that during the first year the utilization of cavalry by all participants was not impressive. Errors in the first concentration are hard to correct, and blunders by the leaders cannot be made good by rapidity of movement. In the attempt to have cavalry everywhere, one had not enough at the decisive place. When Lt. Col. Hentsch gave the First German Army the order to retreat, there was at the Oureq only one weak cavalry division. Had the German high command had 3 to 4 cavalry corps with the right wing, the German cavalry, properly commanded and led, could have produced great results. But, as it was, German G. H. Q. even declined the offer of the German crown prince to give up his cavalry, which he clearly foresaw would be of little use to him at Verdun.

The author dismisses the objection that such a mass of cavalry could not have been adequately supplied. Food for the men and animals should have been provided for the first few days by adequate preparation during peace, but once the cavalry force had invaded hostile country at a considerable distance, it could have lived off the country, as was demonstrated by the cavalry corps Garnier in the battle of Vilna and by the cavalry corps Schmettow in Roumania. The instances in which German and British cavalry (Palestine) attained the few successes are mentioned briefly. The author concludes this section with a statement which, though trite, illustrates the need for commanders-in-chief to understand the proper function of cavalry. History teaches that cavalry can attain a maximum of efficiency only if it is employed by the supreme command at the proper place at the right time. That is basic, but its realization is extremely difficult and presupposes a leader endowed with the divine gift to recognize early where the proper place for the use of cavalry will be and when the right moment for its employment has arrived. Such great leaders are rare.

The next section (28 pages) deals with the mission of army cavalry. In the main the teachings are those of our own service. He considers army cavalry systematically under the following subheads: Protection of Frontiers, Reconnaissance, Screening, Occupation of Territory, Employment in Battle, Cover of a Wing, Pursuit, Retreat, Army Reserve, Independent Activities against Hostile Communications (Raids). He sees the main mission of cavalry in active participation in the decisive battle. This arm is at present better equipped, trained and organized for it than it was during the World War. He favors the single envelopment, as there seldom is available sufficient cavalry for an attack against both flanks.

The problem of leadership is covered in nine pages. He rejects all missions which are given cavalry solely to keep it busy and demands that all missions be not only clear and purposeful but adapted to the nature of cavalry. This section is not only a strategical and

tactical study but a carefully prepared review of the need for the conservation of animals.

The next section is headed Tactics (17 pages) and opens with the terse statement that the nature of cavalry combat consists of alternately riding and shooting. Cavalry must ride in order to be able to shoot at the right place at the proper time, and it must shoot in order to be able to ride again—that is, be available for mobile employment.

A section on the organization of army cavalry (24 pages) is particularly interesting in that the author admits that the war-time organization of the different armies is no longer adequate. The failure of most nations to bring their cavalry up to an organization absolutely indicated for future war is due to tradition and to the general disinclination of military leaders to institute innovations. He stresses among other things the fact that the importance of mounted engineers—pioneers, as he calls them—is underestimated in many armies, since army cavalry working early and alone may often be delayed and hampered by a simple ditch. He praises our cavalry division organization because it has an engineer squadron of three troops.

While army cavalry is an independent arm, divisional cavalry is an auxiliary of infantry, which dictates its mission and function. There is a great difference between reconnaissance by army cavalry and that of divisional cavalry, so much so that he favors a separate nomenclature for the reconnoitering parties with each type. This section is replete with valuable suggestions.

The last section is devoted to training. What the author has to say about the necessity for and the nature of peace training will find a warm response from American cavalry officers. Unfortunately, we, like the Germans, must content ourselves with homeopathic doses.

Taken as a whole, General Brandt's study brings out the following salient points. Modern war demands cavalry in large bodies. We may as well think and prepare in terms of corps rather than of divisions. The cavalry regiment must have a minimum of six troops and a strong machine gun troop. Armored cars have great advantages for reconnaissance as well as for combat. Divisional cavalry must be reduced to the minimum to provide sufficient corps and army cavalry. Training of cavalry must be carried on throughout the year, and a large cavalry terrain exercise (corps) should be held at least every other year. The cavalry divisions must have auxiliary arms, in the right proportion, the same as infantry divisions. Motorization will help cavalry, but the horse remains the most important medium for battle.

In the reviewer's opinion, this book should be translated and published in English so as to render it available not only to cavalry but to all officers.

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Chasing the "Transvaal Wolf"

(Continued from Page 42)

seeing it in the dark, they had stumbled into a line of Boer meat cans, slung upon a wire and placed there to give the alarm. At the instant a single rifle which cracked fifty yards distant, caused the Canadians to hurl themselves on the ground. Hardly had their bodies touched earth before there glared a full six hundred yards of rifle fire from the entire Boers' line.

How the front line escaped destruction is one of the marvelous events of war. To rush the trench was impossible. To remain where they were, when the moon came up, which would occur shortly, would mean that they would be picked off to a man. They chose the only course. Breaking up in loose order and with surprisingly little loss, they made their way back. The two companies which had been followed by the Engineers, had met a better fate. Their expedient of carrying sackfuls of earth was most successful. On the outbreak of the fire the sacks were cast down, the men crouched behind them and time was given for further trenching against what proved to be Cronje's last reveille.

In the morning the British advanced troops found themselves secure and in such a position that they could enfilade the Boer trenches. It was to the heroism and ingenuity of those two companies of Canadians that the credit is immediately due for the white flag which fluttered at daybreak over Cronje's trenches at Paardeberg. At six o'clock that fateful morning, a British infantry general rode into Lord Roberts' headquarters. Following closely behind him, mounted upon a white horse, came a dark bearded man with grizzled hair flowing from under a tall brown felt hat. He was of middle size, strongly built, with the quick restless eye of a hunter. The black broadcloth suit which he wore and the green summer overcoat, together with the small riding whip he carried in his hand, gave him the appearance of a London vestryman. The generals shook hands and it was briefly intimated to Cronje—for he was this Boer soldier in the seeming disguise—that his surrender must be unconditional, to which after a short silence he agreed.

His men, a pallid, ragged crew, emerged from their holes and delivered up their rifles. They were a singular pack indeed, ragged, patched, grotesque, some with goloshes, some with umbrellas and coffee pots. Bibles were their favorite article of baggage. The deep trenches and caves of the laagers from which they emanated along the river were speaking examples of the advantages of the defense over the attack. Crude as they were, they had enabled Cronje and his crew to hold out tenaciously against the fiercest shell fire Lord Roberts could bring against them.

The way to Bloemfontein was open. Lord Roberts' policy of the strategic use of cavalry independent of the main army was amply proved. French had sprung the trap by which the Old Transvaal Wolf was caught. Hereafter, they took no more chances with him but shipped him summarily from Capetown to Saint Helens for the duration of the war.

The United States Cavalry Association

Organized November 9, 1885

DESIGN

1. The aim and purpose of the Association shall be to disseminate knowledge of the military art and science, to promote the professional improvement of its members, and to preserve and foster the spirit, the traditions, and the solidarity of the Cavalry of the Army of the United States.—*Article III of the Constitution.*

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his best wishes
for the
Ensuing Year